

# MODERN PACKAGING

AUGUST

1944

*can ad on p. 15*



N. SYDNEY



## How to get better packages..

A BUSINESSMAN, who was worried about his post-war packaging problem, fell into conversation with a retired milk-wagon horse.

Both were traveling to New York City; the businessman for a conference about packages; the horse to visit one of his sons who was on furlough from a near-by cavalry regiment.

"Something in my own business experience," said the retired milk-wagon horse to the troubled businessman, "may help you with your problem."

"Shoot!" replied the businessman, lighting a cigar.

The horse then explained how it took American Can Company several years and millions of dollars to develop the fibre package for milk...

... how the square Canco Fibre Milk Container economized on space and helped keep milk cool during transportation...

... how the attached cap was convenient to the user and assured a more sanitary package at all times...

... how the new package saved weight and saved the time of the driver...

... and how the Canco Fibre Milk Container has time and again been proved an ideal package from a health standpoint for fluid milk.

"I'm not boring you with all this?" asked the retired milk-wagon horse. "I'm pretty interested in the subject. I made my living in hauling milk in these packages for many years."

"Boring me?" exclaimed the businessman. "Why, that's the company I've been looking for! If American Can Company will just give *part* of the time and thought to *my* problem that they gave to that of the milk industry, my postwar packaging worries are over."

**Moral:** Call our nearest representative for consultation or write:

CANCO

**AMERICAN CAN COMPANY**

**230 Park Avenue, New York 17, N. Y.**



Too much sun—painful burns; painful burns—slowed down war production. Warn war workers that if they would acquire that healthy "well done" look to take the summer sun by degrees . . . and use your sun tan preparation. While packaging materials are being restricted, depend upon us to serve cosmetic manufacturers to the very best of our ability. Phoenix Metal Cap Co., Chicago and Brooklyn.



Elmer Jacobs

# MODERN PACKAGING

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VOLUME 17

AUGUST 1944

NUMBER 12



Member of Audit Bureau of Circulations

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427 West 5th St.      Los Angeles 13, Calif.

## COMING NEXT MONTH

Packaging equipment and machinery will present one of the knottiest problems of the readjustment period. What forms and types will be most in demand? What new needs have developed for machinery and equipment as a result of the shortage era? What have production executives learned about improvements which they desire? What have they been doing to "get along" for the duration? Next month the results of a survey, conducted to try to find the answers to the foregoing questions in a number of different lines of business, will appear in MODERN PACKAGING. Every machine user and maker will want to read the article.

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EXECUTIVE and EDITORIAL OFFICES: 122 E. 42nd St., New York 17, N. Y. WASHINGTON OFFICE: 625 Colorado Bldg., 14th & G Sts., D. C. 6

Published the 5th of each month by Breskin Publishing Company. Publication office: Twentieth and Northampton Sts., Easton, Pa. Subscription \$5.00 per year in United States; Canadian, \$5.50; foreign, \$6.00. Two-year subscription: United States, \$8.00; Canadian, \$9.00; foreign, \$10.00. All foreign subscriptions payable in United States currency or equivalent in foreign currency computed in current exchange. Price this issue, 50¢ per copy. Copyright 1944 by Breskin Publishing Company. All rights reserved including the right to reproduce this book or portion thereof in any form. Printed in U. S. A. Acceptance under the Act of June 5, 1934, at Easton, Pa. Authorized October 7, 1936.

12

**An effective method of product protection**

## **FOR WARTIME AND POSTWAR PACKAGES**

Sealing in the original freshness and flavor of fine candy is an important job for CEL-O-SEAL cellulose bands at any time.

Today, "Satinets," a product of the Anderson Candy Co., are packed in glass jars with a metal-saving closure of waxed cardboard sealed securely in place by CEL-O-SEAL bands.

Tomorrow, CEL-O-SEAL bands will do an equally good job on the new type of packages which victory will bring.

CEL-O-SEAL bands discourage meddling with the closure and forestall sampling the contents. The bands are supplied in colors that add distinction to the container. Impregnated with monogram, slogan or trade mark, they serve as a second label which adds sales appeal to the package.

Keep CEL-O-SEAL bands well in mind. They offer you a modern method of product protection at any time . . . now and for new re-designed packages after victory is won. Write for complete information.

**CEL-O-SEAL bands are sold by:**

E. I. du Pont de Nemours & Co. (Inc.), "Cel-O-Seal" Section  
Empire State Bldg., New York City 1

Armstrong Cork Company, Glass & Closure Div., Lancaster, Pa.

I. F. Schnier Company, 683 Bryant Street, San Francisco 7, Calif.



**DU PONT**  
**CEL-O-SEAL**  
TRADE MARK  
**BANDS**



BETTER THINGS FOR BETTER LIVING...THROUGH CHEMISTRY



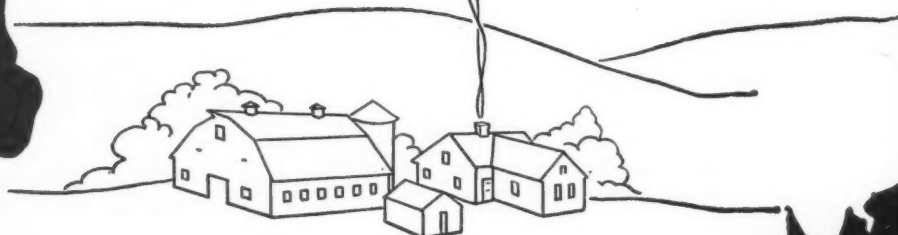
# He profits most + + who serves best

( A BUSINESS AXIOM WORTH  
REMEMBERING, PASSED ALONG BY )



MAKERS OF

## FOOD PROTECTION PAPERS



**KALAMAZOO VEGETABLE PARCHMENT COMPANY**  
PARCHMENT · KALAMAZOO 99 · MICHIGAN  
BRANCH PLANTS IN PHILADELPHIA, PENNSYLVANIA, AND HOUSTON, TEXAS

## Formula for a postwar package

MATERIALS	WEIGHTS
GEON 101 or 102	62.1
Plasticizer	32.0
High melting point hydrocarbon wax	4.4
Stabilizer	1.5

THAT'S the makeup of a typical GEON formulation for a transparent calendered coating for paper or board that may be of real importance to your business in the future. GEON is the name of a new group of vinyl resins and plastics having many established—and many unthought-of—uses in your industry.

GEON resins may be made into a wide variety of thermoplastics that can be used as coatings for papers, calendered or cast into sheet and film, pressure or injection molded, or extruded—all at low cost on standard machinery. Or in other forms, GEON may be used as sizing, ink or paint.

The following properties may be found in GEON or GEON-treated materials in a wide variety of combinations:

Flexible	Tasteless
Waterproof	Increased tear resistance

Spongeable	Increased tensile strength
Lightweight	Easily embossed
Odorless	Wide range of colors and luster
Non toxic	Can be heat-sealed

### *Resistant to*

Acids	Foods	Spots and	Light
Alkalies	Creasing	stains	Aging
Chemicals	Flame		Cold
Oil	Mildew	Blocking	Heat

Although GEON is currently available to industrial users, subject to allocation under General Preference Order M-10, limited quantities can be had for experiment. And our research staff and laboratory facilities are available to help you work out any specific problems or applications. Just write, Department L-3, Chemical Division, The B. F. Goodrich Company, E. Ninth and Prospect, Cleveland 15, Ohio.

**CHEMICAL DIVISION**  
**THE B. F. GOODRICH COMPANY**  
ROSE BUILDING E. NINTH & PROSPECT CLEVELAND 15, OHIO



**"Vincent claims that  
nothing sticks like  
Swift's glue"**



Right now we are supplying adhesives for a lot of work that is just about as unusual—and difficult—as Vincent's situation above.

No matter what kind of product you make—or what kind of adhesive you need—we can probably supply you with a standard branded product made especially for that particular job; and if we do not already have it, we will develop one.

Whether it is cold vegetable adhesive—or flexible glue—or liquid animal glue—or dry glue—or the newer types made from synthetic resins, rubber, rosin, or asphalt—**THINK OF SWIFT!**

Because we make *all* kinds, we are always able to supply the one that is best adapted, even though there may be temporary shortages or limitations on some other type.

## **SWIFT MAKES ALL ADHESIVES**

Vegetable Adhesives • Pastes • Rubber Emulsions  
Synthetic Resin Emulsions • Dry Animal Glue  
Liquid Animal Glue • Flexible Animal Glue

**for all uses, including:**

Folding Boxes	Loose leaf binders
Tight Wrapping	Mountings
Stripping	Magazine coverings
Brightwood Machines	Leather goods
Carton sealing	Padding
Case sealing	Tin labeling
Remoistening	Tube winding
Bottle labeling	Tipping
Laminating	— many others

### **SWIFT & COMPANY**

CHICAGO 9, ILLINOIS

*Stocks and Factories — Principal Cities*

**Buy More War Bonds —  
Hold What You Have!**





**ARE YOU READY FOR**

**C DAY?**

D Day for Fortress Europe is history . . . and what history! C Day for you and your business is still ahead . . . but closer perhaps than you think and more surprising in its results. For C Day will be Consumer day, and the battle as always will be won by the Consumer. ☆ Are you ready? Will your packages have the display value, selling punch and buy appeal which the competition ahead will demand? Make sure by planning now. Milprint is at your service.

**MILPRINT Inc.**

PACKAGING CONVERTERS • PRINTERS • LITHOGRAPHERS

PLANTS AT MILWAUKEE, PHILADELPHIA, LOS ANGELES

Printed Cellophane, Pliofilm, Glassine, Aluminum Foil, Coated and Laminated Papers, in all forms including Sheet Wraps, Rolls, Pouches, or Specialty Bags. ☆ Revelation Bread Wraps, Specialty Folding and Window Cartons, Counter Displays, Simplex Pie and Cake Units.

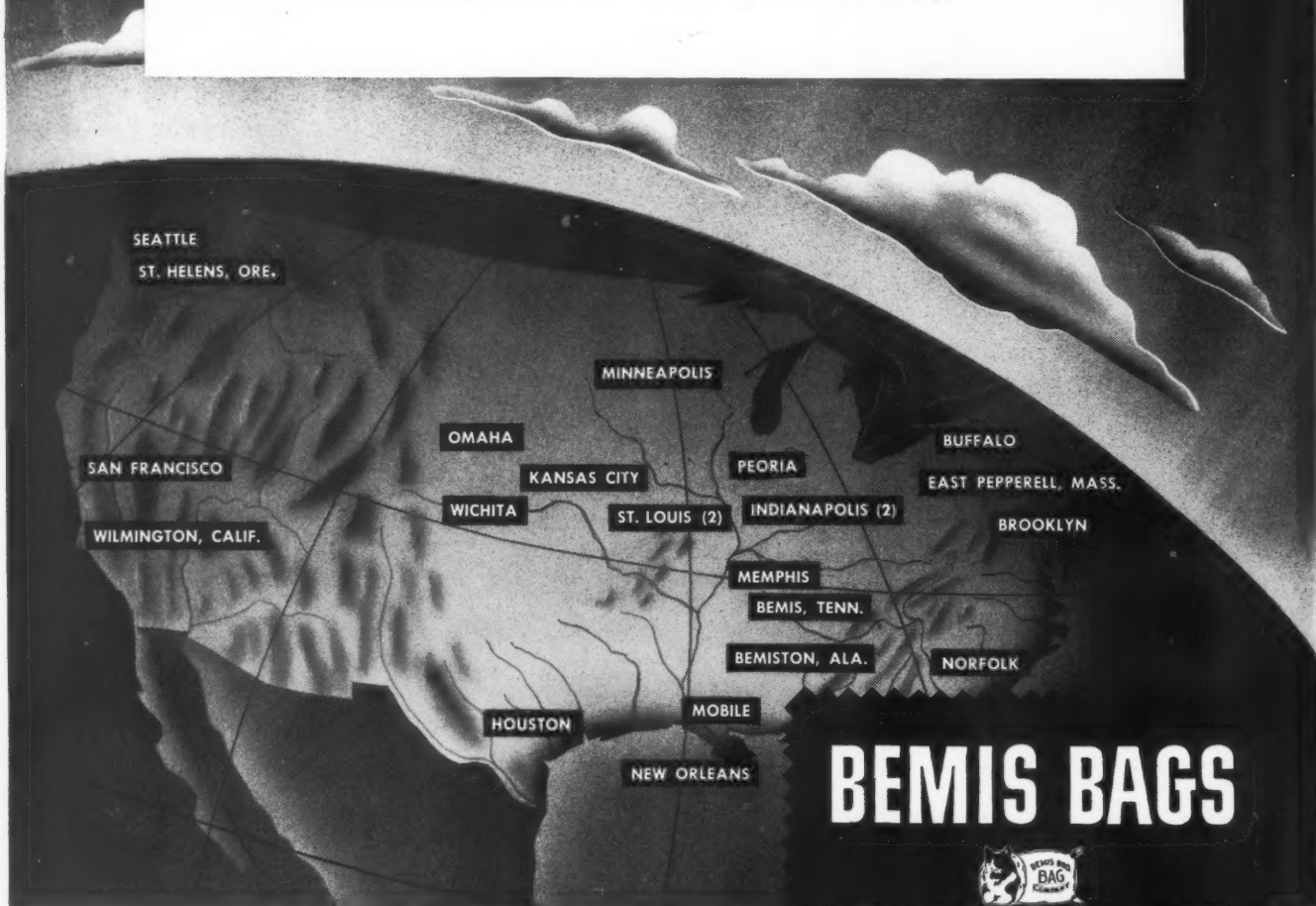
SALES OFFICES IN: NEW YORK • CHICAGO • SAN FRANCISCO • PHILADELPHIA • LOS ANGELES • GRAND RAPIDS  
ATLANTA • ST. LOUIS • MINNEAPOLIS • BOSTON • CLEVELAND • CINCINNATI • PITTSBURGH • DALLAS • INDIANAPOLIS

## TWENTY-THREE BEMIS FACTORIES TO SERVE YOU

WARTIME restrictions and the tremendous movements of the many essential products that are shipped in bags naturally create a tight supply situation. It's a difficult problem to furnish all of the bags that are needed... just when they are needed.

That's why it pays to do business with a company like Bemis.

Twenty-three factories across the country mean a lot of productive capacity... and they also mean convenience and the best possible service under any prevailing conditions. In short, we sincerely believe that today, as in normal times, you'll find Bemis Bro. Bag Co. your most versatile, most reliable source of supply.



# BEMIS BAGS



### BEMIS BRO. BAG CO.

OFFICES: Baltimore • Boston • Brooklyn • Buffalo • Charlotte  
Chicago • Denver • Detroit • East Pepperell • Houston • Indianapolis  
Kansas City • Los Angeles • Louisville • Memphis • Minneapolis  
Mobile • New Orleans • New York City • Norfolk • Oklahoma City  
Omaha • Peoria • St. Helens, Ore. • St. Louis • Salina • Salt Lake City  
San Francisco • Seattle • Wichita • Wilmington, Calif.

BETTER BAGS FOR 86 YEARS

*Bemis makes Cotton, Burlap and Paper Bags*



East Pepperell, Mass.

# Right ON 5 COUNTS

Trial of Alcoa Aluminum Tubes swiftly brings out 5 advantages. To wit:



**PURITY**.. Aluminum is non-toxic. Alcoa Aluminum Tubes will not contaminate the contents, render the product injurious.



**STRENGTH**.. Alcoa Aluminum Tubes have sturdy shoulders and sound wall. Good to the last squeeze.



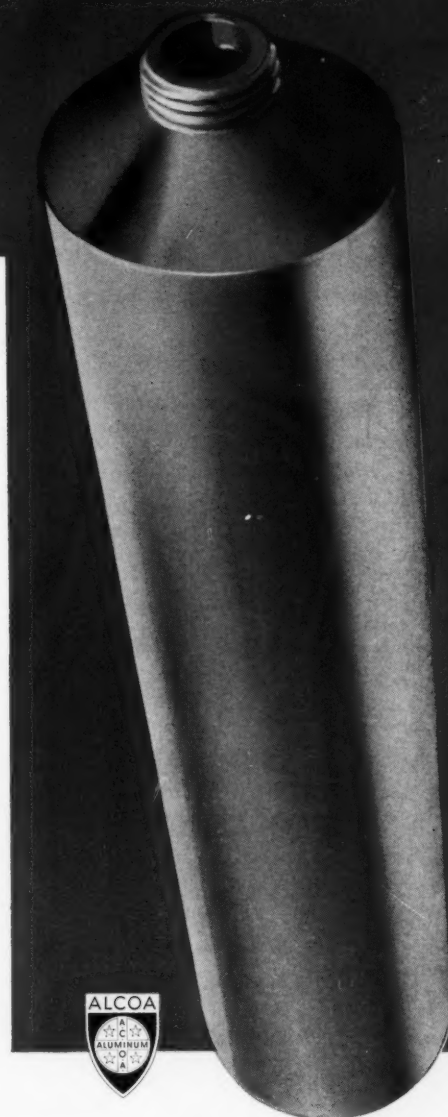
**BEAUTY**.. There's plenty of sales appeal in the well defined, colorful lithography you get on Alcoa Aluminum Tubes.



**LIGHTNESS**.. It may be small but it adds up, the saving in shipping costs with light Alcoa Aluminum Tubes.



**LOW COST**.. Prices of Alcoa Aluminum Tubes are low.



Many products can be satisfactorily packaged in plain, aluminum tubes. For those that can't, interior coatings that prevent any reaction between tubes and contents, have been perfected by Alcoa. The Alcoa Packaging Laboratory can run tests to determine which type you need.

Alcoa Aluminum Tubes are now being supplied

in accordance with WPB regulations governing their use, and subject to the limits that war work and manpower impose on productive capacity. Our representatives will be glad to discuss their availability with you. ALUMINUM COMPANY OF AMERICA, 2129 Gulf Building, Pittsburgh 19, Pennsylvania.

PACK *Safely* IN  
**ALCOA ALUMINUM TUBES**



# What Is the Correct Package for Overseas Shipment?



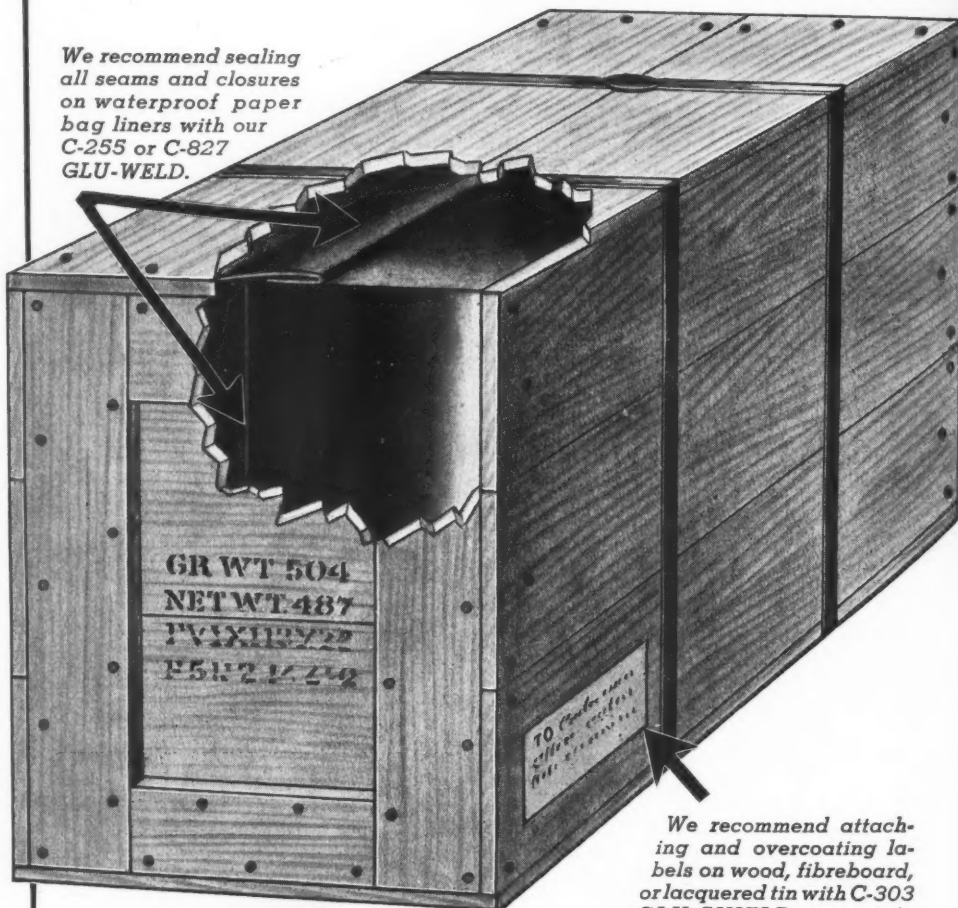
## Our Definition:

A package which is correct for overseas shipment of war materiel is one to which has been applied principles of common sense; one which, in all possible cases, exceeds rather than shades the requirements of the specifications involved; one in which equal attention has been given to exterior and interior containers, blocking and bracing, corrosion prevention, and permanent marking; one in which a shipper takes pride in his assurance that despite rough handling, outdoor storage at the ends of the earth and transportation of all types, his product will be **READY FOR WAR.**

Partial check list of a correct package. Go over one of your packages and check yes or no. Rating must be 100 on this quiz.

1. Was part thoroughly cleaned before preserving?
2. Was part wrapped in correct grade and type of grease-proof paper?
3. Was part properly braced inside box?
4. Was waterproof paper bag liner used inside exterior container?
5. Were ALL SEAMS AND CLOSURES OF THAT LINER SEALED WITH A WATER-RESISTANT ADHESIVE?
6. Was box used built in EXACT conformance with specifications?
7. Were correct steel straps used and properly spaced?
8. Was correct marking employed, including service force color identification and properly placed destination and contents symbols?
9. If labels were used, were they attached and overcoated with a RELIABLE WATER-PROOF LACQUER?

*We recommend sealing all seams and closures on waterproof paper bag liners with our C-255 or C-827 GLU-WELD.*



*We recommend attaching and overcoating labels on wood, fibreboard, or lacquered tin with C-303 GLU-SHIELD, a quick-drying waterproof lacquer.*

IN THE MIDWEST

**The F.G. Findley Company**

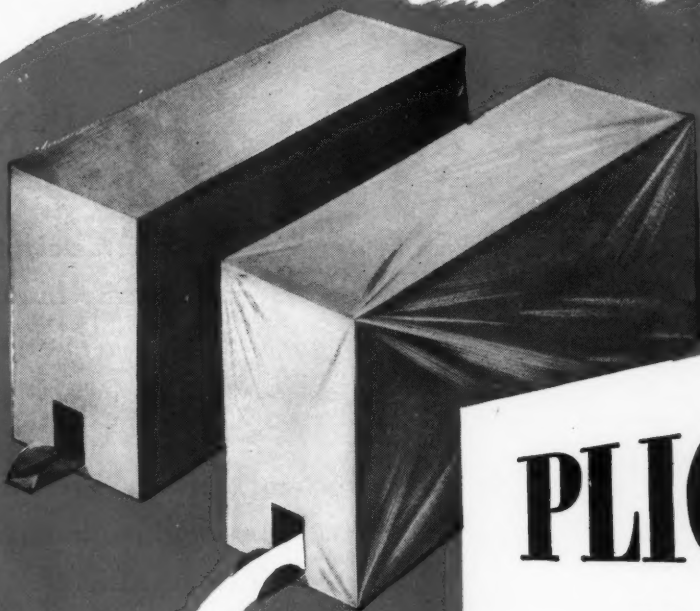
1230 NO. 10th STREET • MILWAUKEE 5, WIS.



IN THE EAST

**Union Paste Company**

1605 HYDE PARK AVENUE • HYDE PARK 36, MASS.



# PLIOLITE

## FOR BETTER POSTWAR PACKAGING

**PLIOLITE KEEPS SALT 16 TIMES DRIER**—Experiments prove that moisture absorption of salt in an uncoated container is 1330 grams—as against 86 grams in a container coated with **Pliolite**—16 times more protection against moisture.

**WHAT Pliolite**—Goodyear's moistureproof paper coating—does for table salt it can also do for many other packaged products.

Whether you want to keep moisture in or keep it out, **Pliolite** is a simple and versatile product readily adaptable to your present packaging machinery and processes.

**Pliolite** is a solution that can be applied to paper, transparent sheetings, labels, fiber cans, and metallic foils. Combined with wax, it gives a directly applied

protective coating to products like cheese—it is odorless and tasteless as well as moistureproof.

**Pliolite** imparts a transparent and glossy finish that adds immeasurably to the sales appeal of the most economical package.

Heat sealing, a **Pliolite** weld often is stronger than the material it covers—and makes its own closure.

Right now **Pliolite** is widely used for war purposes. We invite your inquiries concerning its use in meeting your postwar packaging problems. For information, write Plastics and Chemicals Department, Goodyear, Akron 16, Ohio.

Let's all  
Back the Attack  
with War Bonds

# PLIOLITE

Pliolite—T. M., The Goodyear Tire & Rubber Company

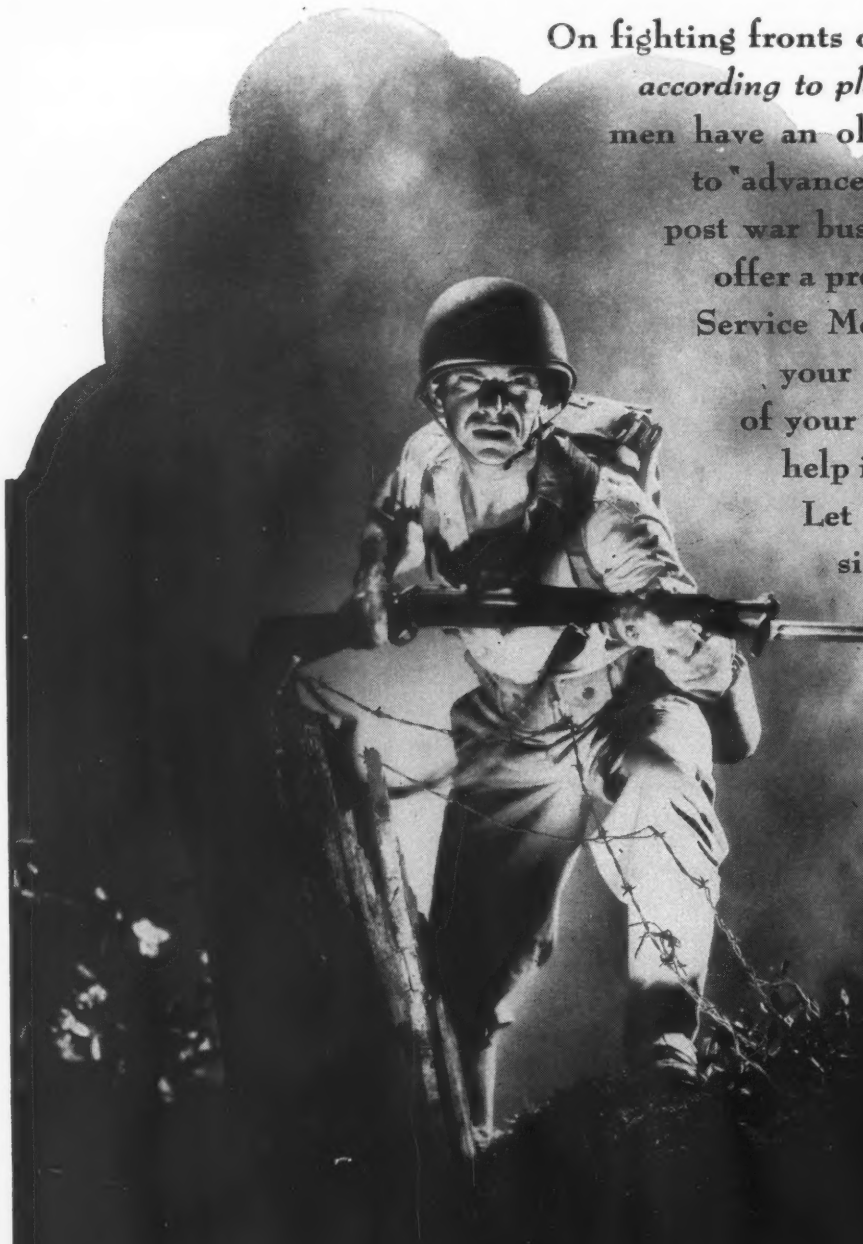
A PRODUCT OF GOODYEAR RESEARCH

# GOOD YEAR

THE GREATEST NAME IN RUBBER

# *Advancing...*

## ACCORDING TO PLAN!

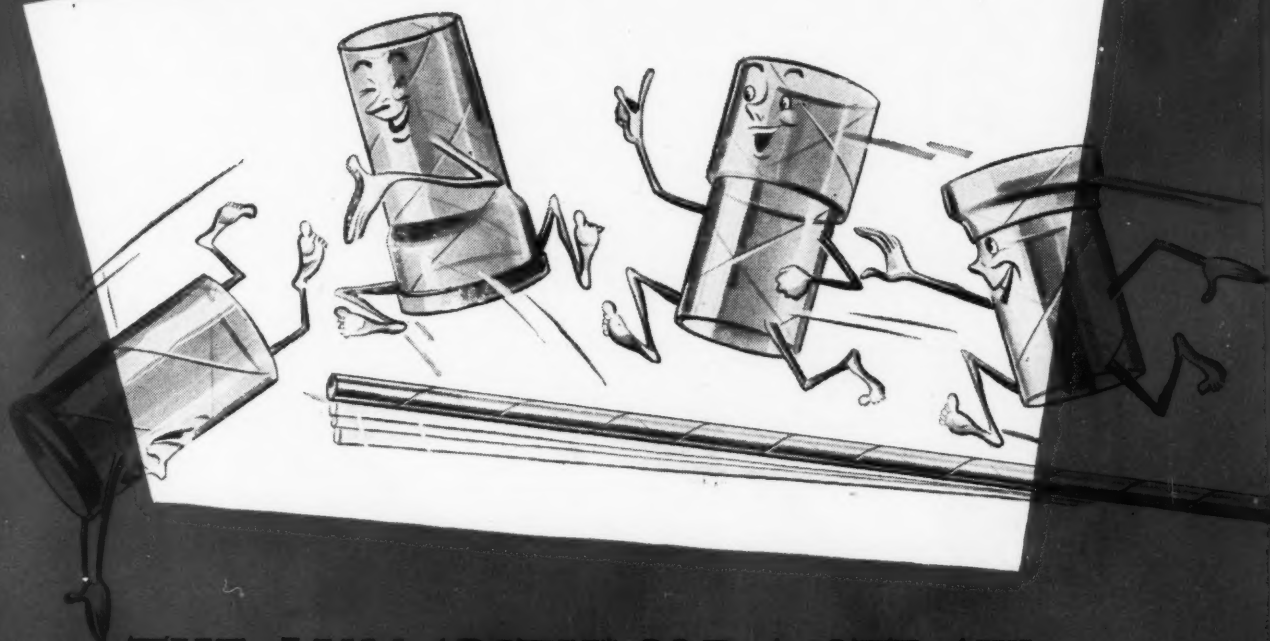


On fighting fronts our boys are advancing . . .  
*according to plan.* Here at home business  
men have an obligation to these boys . . .  
to "advance by plan" also . . . to plan the  
post war business world so that it will  
offer a promising future to returning  
Service Men. Planned packaging of  
your post war products is one  
of your responsibilities today . . . to  
help in this job of rehabilitation.  
Let APACO engineers and de-  
signers study your needs *now.*

### ATLANTA PAPER COMPANY

*Atlanta*  
Established 1868





## THE LUMARITH<sup>®</sup> SODA STRAW

*was just a SPRINGBOARD . . .*



**The spirally-wound Lumarith container is on its way to become an even bigger item in packaging.**

You will find the old Lumarith soda straw idea doing business all over the war front these days. The spirally wound unit is the work-horse of the packaging line. It doesn't cost very much. It is a fast production package. Yet it is tough and attractive. It does not have the glamour of a clear transparent package, but for certain jobs it is better.

In considering this type of package for your own products, don't limit your thinking to tubes. Fabricators produc-

ing spirally-wound Lumarith can give you square shapes and ovals just as readily. Of course, there is a wide choice of diameters and wall thicknesses. The main point is to consider spirally-wound Lumarith as a solution to your tough packaging problems. The way to start is to discuss your needs with us . . . *Celanese Celluloid Corporation*, a division of *Celanese Corporation of America*, 180 Madison Avenue, New York City 16.

\*Reg. U. S. Pat. Off.

For proof of the job that can be done by a spirally-wound container, take a look at the Ioply. Here the glass ampule inside is broken by squeezing the tube. No glass or iodine comes through the Lumarith . . . For the Very Pistol Cartridge, Lumarith supplies waterproofness and visibility for identification.

**LUMARITH<sup>®</sup>**  
*A Celanese Plastic*



## A fighting man's "LUNCH BOX"...

### Mr. Cellophane guarding the rations

VITAL INVASION RATIONS . . . are sealed in a two-ply Sylvania cellophane Ration Bag. Coffee, sugar, crackers, chocolate—and other items easily spoiled by moisture—arrive on the beachheads perfectly preserved, thanks to that double-walled protection of cellophane. Sylvania bags are moisture resistant, water-repellent

and extremely tough.

Sylvania cellophane appears on all fighting fronts in many important roles. But from the developments Sylvania has under way today, you can look forward to many more uses for cellophane — and better cellophane — in the postwar tomorrow.

# SYLVANIA CELLOPHANE

SYLVANIA INDUSTRIAL CORPORATION

Manufacturers of cellophane and other cellulose products since 1929

General Sales Office: 122 E. 42nd St., New York 17, N. Y. ★ Works and Principal Office: Fredericksburg, Va.



• Reg. Trade Mark

# Keller-Dorian

## A NAME THAT IS IMPORTANT TO YOU

### KEEPS MARCHING ON

Intent in our purpose to serve the best in the line  
of functional papers and ever endeavoring to  
satisfy the needs of our regular paper consumers.

IN PAPER

MAKE YOUR PROBLEMS OURS.

*"Protection Performance Pays"*



C O R P O R A T I O N

516 West 34th Street • New York 1, N. Y.



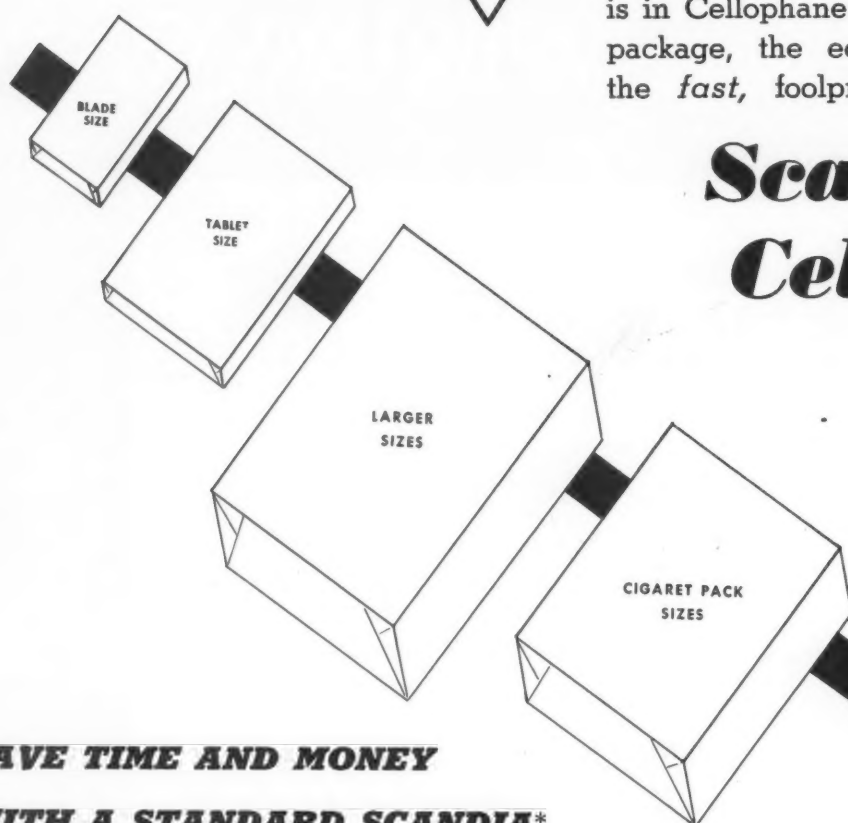
# For **Moisture-Proof** **PACKAGING--**

with  
or without  
**TEAR  
STRIP**

UP TO **350** per minute! . . .

Whether your product is improved by excluding or retaining moisture, the answer is in Cellophane protection. The perfect package, the economical method and the *fast*, foolproof equipment is the

**Scandia**  
**Cellophane**  
**Tite-wrap**



**SAVE TIME AND MONEY**

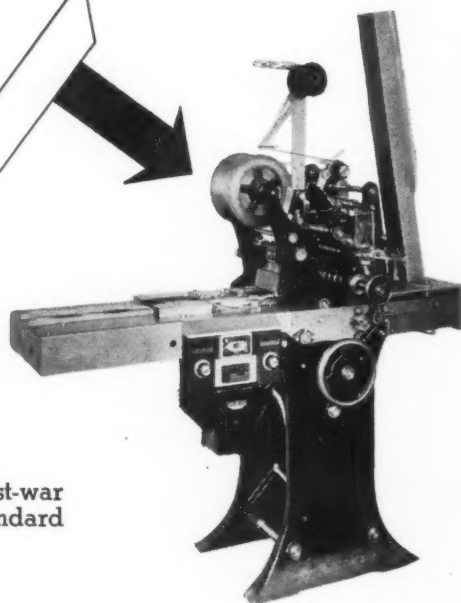
**WITH A STANDARD SCANDIA\***

Manufacturers whose "peak of prestige" relies on the snug, smooth tite-wrap, with or without a convenient "tear-strip" do not compromise with requisite protection; *they want SCANDIA* wrappers.

PACKAGING  
PROBLEMS HAVE  
BEEN SOLVED BY  
SCANDIA FOR  
OVER 26 YEARS.

Packaging for War-essentials, or for Post-war products, you'll find one of the standard Scandia units your best bet!

\* Manufactured under Bronander Patents.

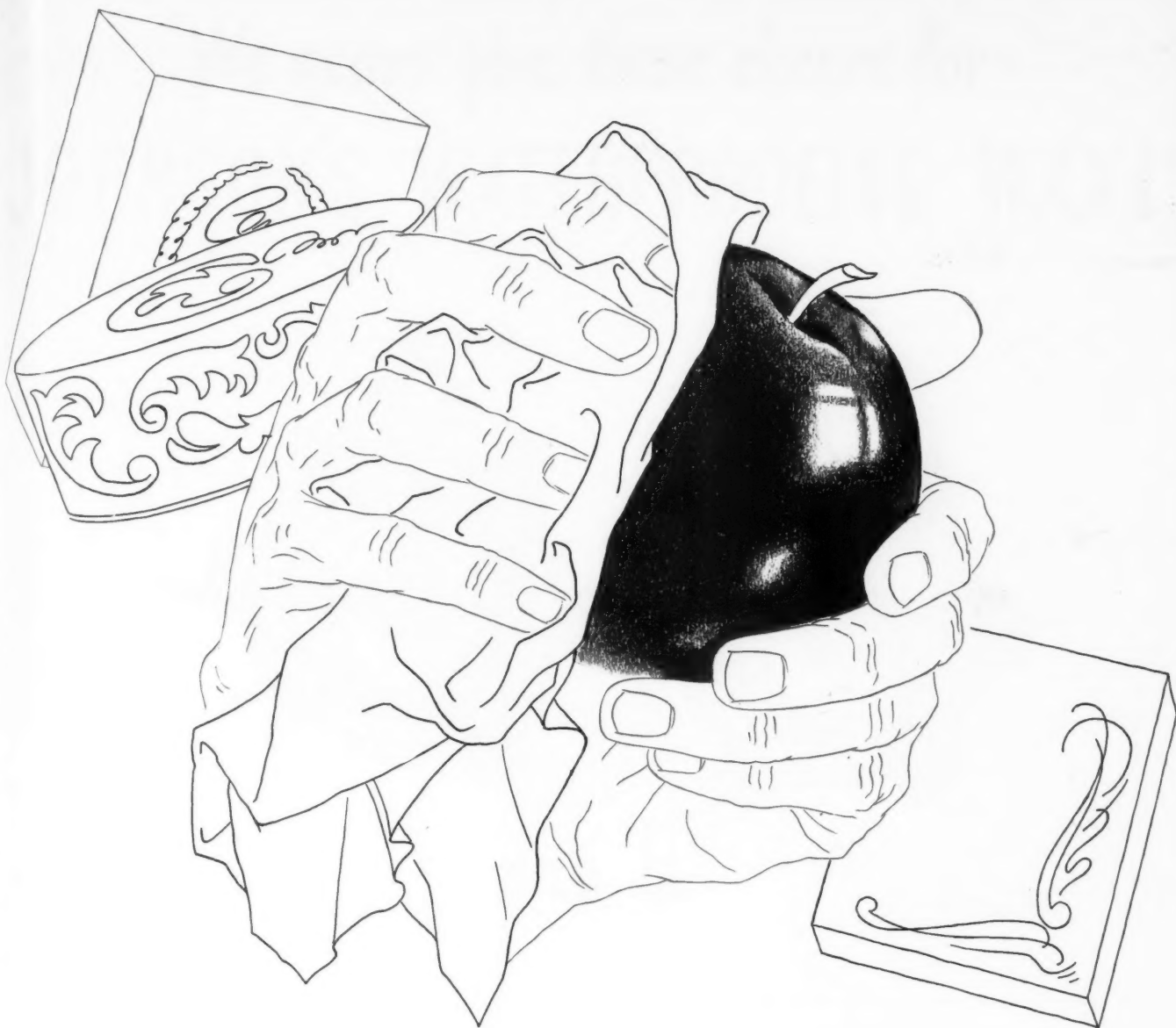


*Ask for details! Our Packaging Engineers are at your service.*

**Scandia** MANUFACTURING CO.

NORTH ARLINGTON

NEW JERSEY



## APPLE POLISHING POSTWAR

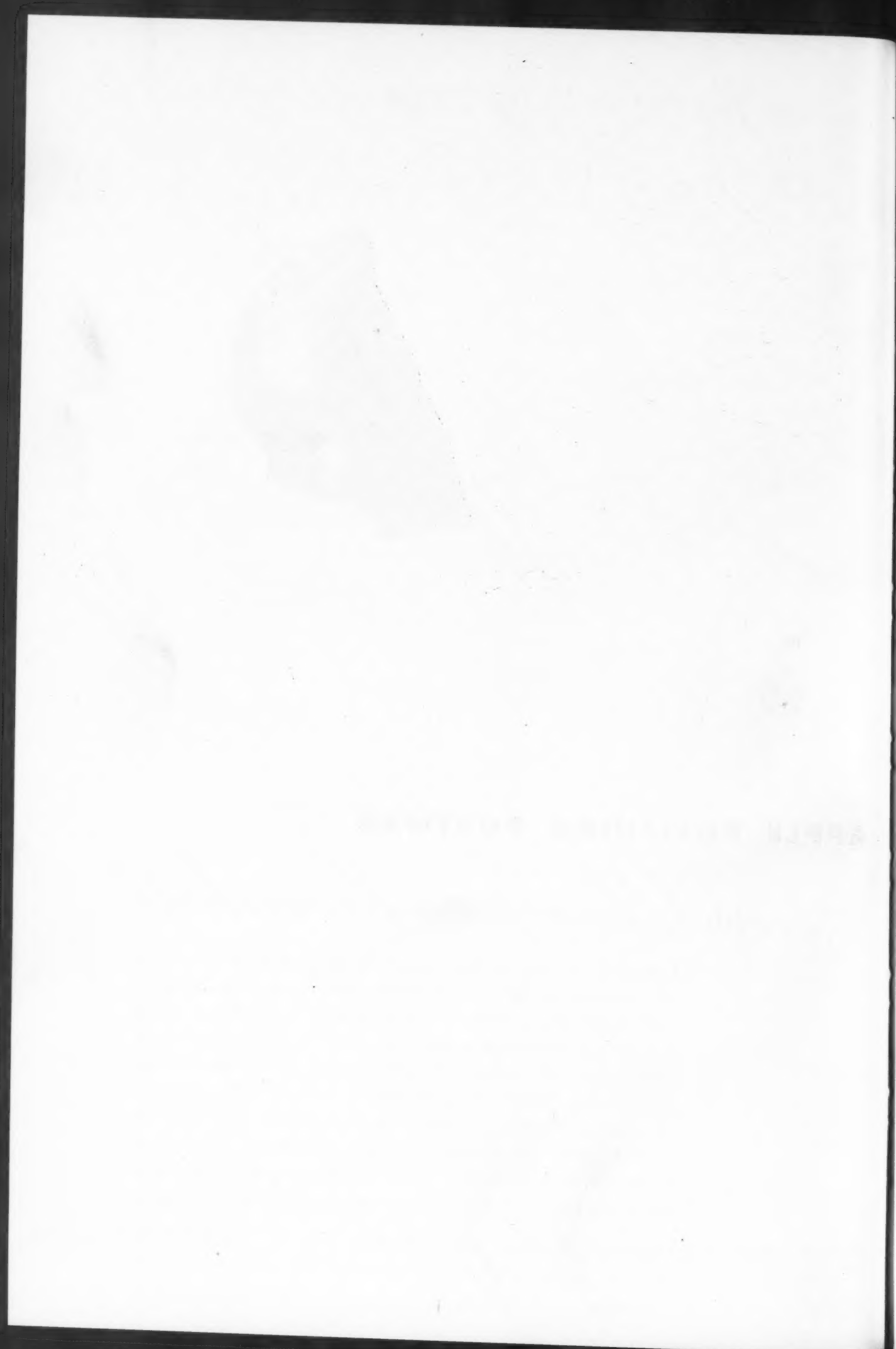
... with *Champion Kromekote*\*

Everybody is going to have money in his pocket after the war, but immense production will create unheard of competition for every dollar. If you want to sell your postwar product to a choosy customer, you've got to polish it up. And that suggests a really good design and Champion Kromekote, that glistening, shiny paper that is exclusive with Champion. A beautiful rich setting for the finest products . . . a marvelous invitation to investigate the product within. Production at present is curtailed by war, but if you are not already familiar with Champion Kromekote and how it can help your postwar packaging, write today for samples.



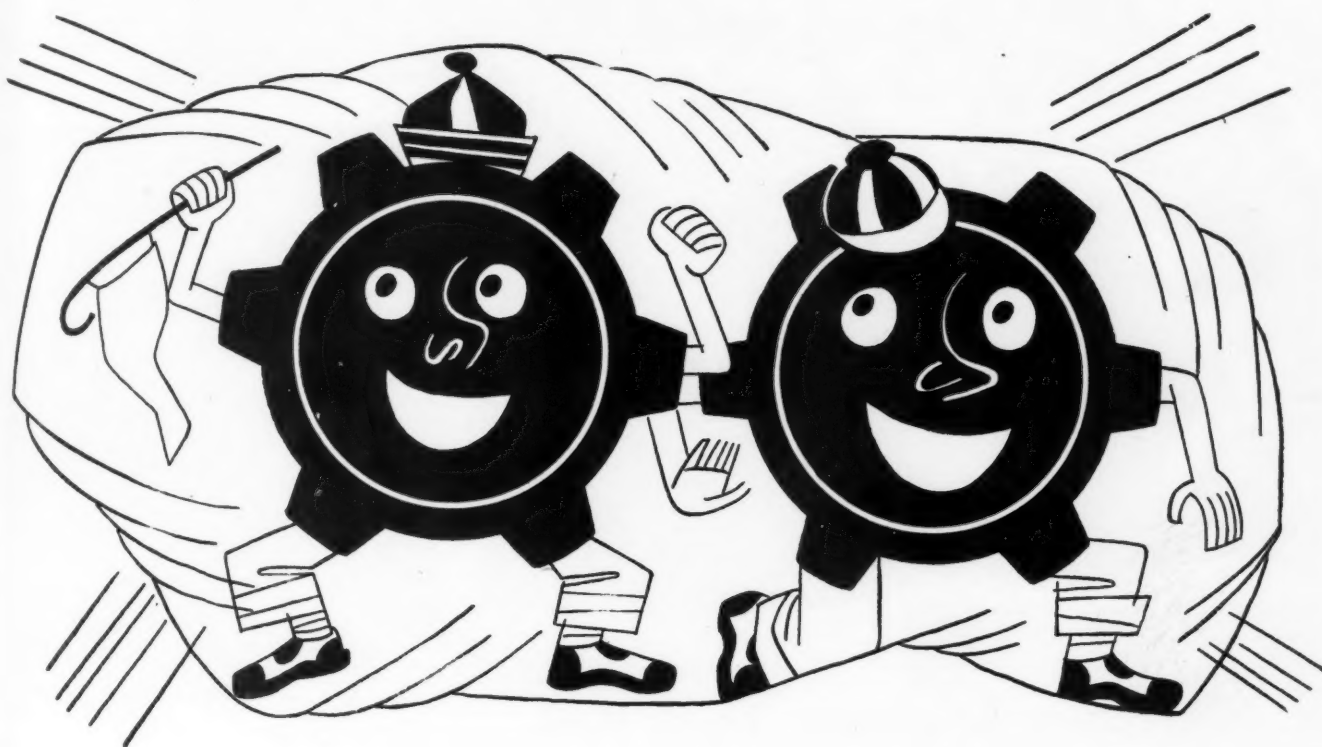
THE CHAMPION PAPER AND FIBRE CO. . . . HAMILTON, OHIO  
MILLS AT HAMILTON, OHIO . . . CANTON, N. C. . . . HOUSTON, TEXAS

\*Kromekote is the registered trade-mark of The Champion Paper and Fibre Company's cast coated high finish paper.





# "We gears give three cheers for JOHNSON'S WATERPROOFING WAX!"



"They tell us we're to become part of a tank in Italy ... or Russia ... or New Guinea. Wherever we go you can be sure of one thing—we're mighty glad our wrapping is protected by a sealing coat of Johnson's Waterproofing Wax!"

Many manufacturers who package vital war materials for overseas shipment use Johnson's Waterproofing Waxes as a shield of protection en route—to help get the goods there in the best possible condition!

### *Meet Army and Navy Specifications*

Makers of metal parts use Johnson's Waterproofing Waxes to protect against rust and corrosion. These special waxes safeguard delicate and vital equipment ... for example, radar parts and aerial cameras.

When peace comes Johnson's Waterproofing Waxes will be available for all your packaging. Right now, however, we can supply them only for wartime uses. If you are packaging war equipment or materials, write for complete information.

### **JOHNSON'S WATERPROOFING WAXES PROTECT THESE WAR MATERIALS FOR OVERSEAS SHIPMENT**

**METAL REPLACEMENT PARTS** for planes, tanks, jeeps.

**MEDICINALS** to guard the health of our fighting men.

**SURGICAL INSTRUMENTS** save human lives.

**DRY CELL BATTERY JACKETS** that help keep batteries dry.

**MANY OTHERS**, which must be protected against damage by moisture.

*Made by the makers of Johnson's Wax*

★ *Speed the invasion with MORE War Bonds!* ★

## **S.C. JOHNSON & SON, Inc.**

Industrial Wax Division, Dept. MP-84, Racine, Wis.



## Wartime Lessons That Aid in Planning Postwar Packaging

As a result of packaging lessons taught by the war, the package of the future will be lighter, less bulky, stronger. It will cost less. It will safeguard contents more effectively against moisture, shock, abrasion, crushing, abrupt temperature changes.

Much of this new efficiency is due to increased use of versatile, cushion-like KIMPAK Creped Wadding. Experts have discovered that, with surprisingly little package-weight or bulk, KIMPAK absorbs severe shocks and blows . . . protects finish . . . insulates against sudden tem-

perature variations. It costs little, saves labor, eliminates packaging operations.

Because KIMPAK comes in many different forms, it meets a tremendous variety of requirements. It is made in *ten standard types*, each in a *number* of thicknesses, is available in pads, sheets or rolls.

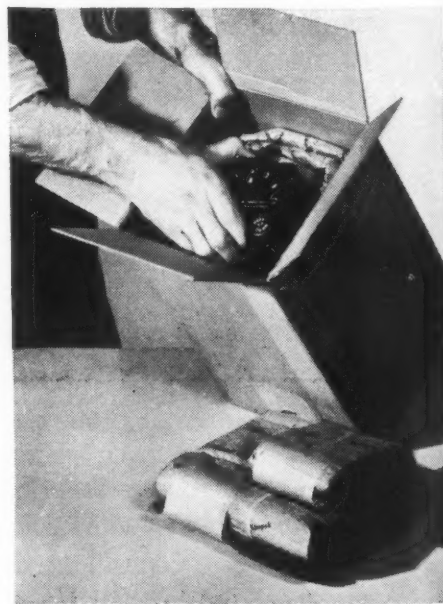
For a post-war packaging plan, call in the KIMPAK man. His expert advice will cost you nothing, and there will be no obligation! Telephone, write or wire today to Kimberly-Clark Corporation, Neenah, Wisconsin.

A PRODUCT OF  
**Kimberly  
Clark**  
RESEARCH

**Kimpak**  
REG. U.S. PAT. OFF. & FOREIGN COUNTRIES  
**CREPED WADDING**



A typical example of KIMPAK'S use for protecting fragile, irregularly shaped objects against shock. This aviation Gyro-Horizon instrument is wrapped with a 60-ply KIMPAK Wrapped Pad between the product and the container sidewall.



This illustration shows accordion-folded pads of different thicknesses, which fill the void that occurs at top and bottom of container as a result of projections on instrument.

\*KIMPAK (trade-mark) means Kimberly-Clark Wadding



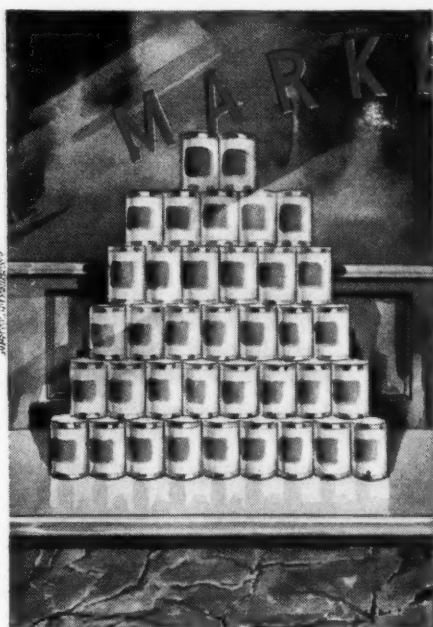
# ***BONDERIZED Sheet Steel***

**GETS THE PRODUCT TO MARKET—SAFELY**

Enclosed in Bonderized Sheet Steel the product is protected from the hazards of shipping and storing. Steel does not break from shock, is impervious to moisture and the attack of rodents. The Bonderized Steel package has strength, fine appearance and long "shelf life." It lends itself to labeling or lithographed self-decoration.

Bonderized Sheet Steel is adapted to cans, containers and closures. It provides a sanitary, practical, low cost container with a high degree of protection for the contents.

**PARKER RUST PROOF COMPANY**  
E. MILWAUKEE • DETROIT 11, MICHIGAN



For appearance, convenience in handling and protection to the contents, Bonderized Sheet Steel makes an ideal package.

**BONDERIZING • PARKERIZING • PARCO LUBRIZING**  
HOLDS PAINT TO STEEL      INHIBITS RUST      RETARDS WEAR

**PARKER PRODUCTS CONQUER RUST**





## MANHATTAN'S LION...UP ON HIS TRICKS!

Manhattan's "Leo" serves Industry . . . for more than a quarter century, this standard bearer has tussled with and subdued many an adhesive problem! And you'd be surprised to learn the amount of chemical know-how attending these successful formulations! . . . a glue that will anchor a bottle label might drift loose from a case . . . a glue that will spiral snugly 'round a tube has no stix appeal to a bookbinder . . . etc. Here, at Manhattan, we are busy with all types of adhesives, for glue is vital to industry's all-out production toward victory for peace!

And, at the same time, we are continuing to search for still better ways of making still better glues. What we have learned, added to what we know, is already being reflected in Manhattan's adhesives of tomorrow. So, if you've a present or anticipated glue problem, call on Manhattan's "Leo" and staff. They've got what it takes to help you!

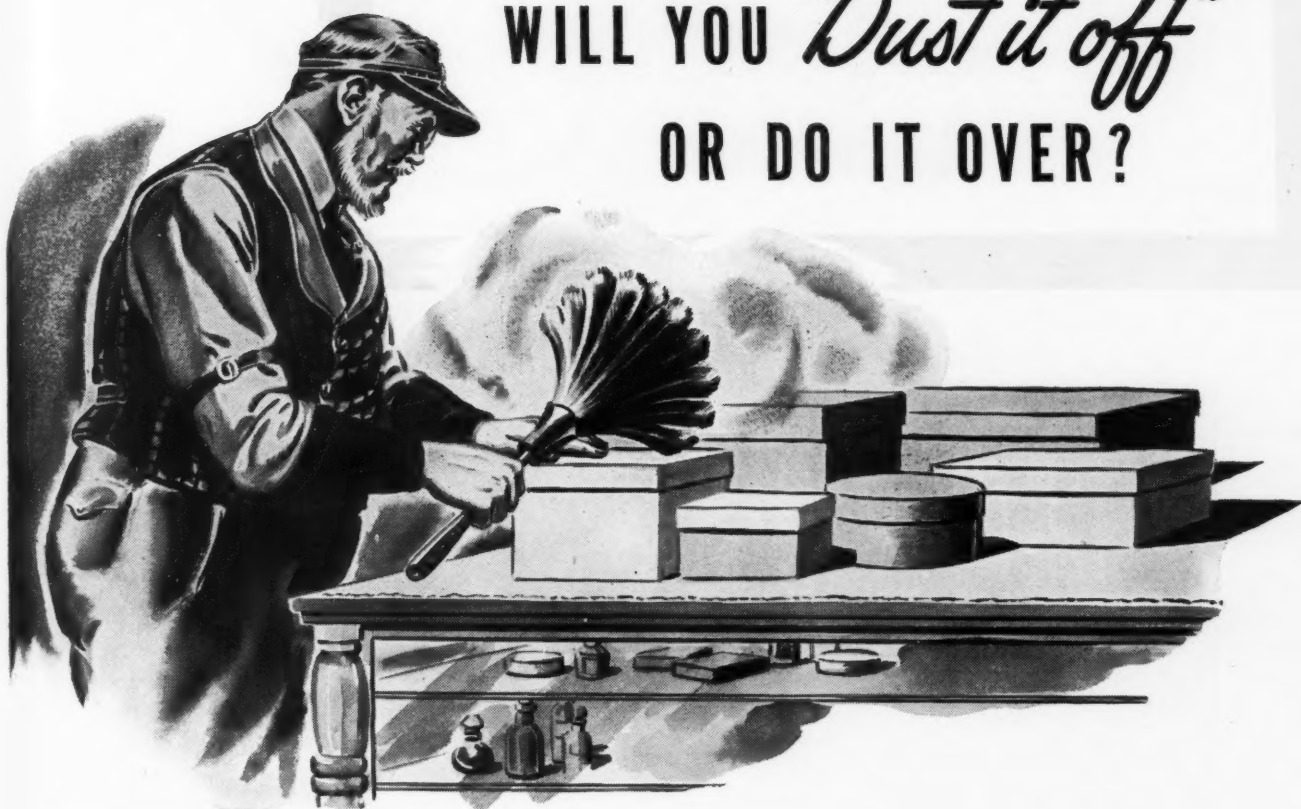
**MANHATTAN PASTE & GLUE CO., INC.**

Chicago • Philadelphia  
Rochester • Boston  
Columbus, O.

*Lion Brand Adhesives*

425 GREENPOINT AVENUE, BROOKLYN, N.Y.

WILL YOU *"Dust it off"*  
OR DO IT OVER?



**DOBECKMUN  
PACKAGING SPECIALTIES**

**Package design**—the right combination of material, shape and design to provide protection, attractiveness and utility.

**Cellophane bags**—from ounces to gallons; printed or plain; single or duplex; flats, squares or satchels.

**"Tritect" cellophane**—wax-laminated film for extra protection, in rolls, sheets or bags.

**"Metalam"**—heat-sealing aluminum foil permanently bonded to tough film, to give your product positive protection.

**Printed films and foils**—in sheets and rolls.

**Laboratory testing**—complete facilities for pretesting packages under all conditions of climate and service, to insure the right answer in advance.

*Tritect and Metalam are trademarks of The Dobeckmun Company.*

You'll need to do more than dust off the old package to keep ahead of competition in the days to come. New ideas, materials and machinery will set a fast pace, as soon as critical supplies and manpower are available.

Appearance, utility, display value and product protection will count more than ever before. Ask yourself whether your package will measure up.

Films and foils will definitely lead the style parade, because with their unquestioned sales appeal they combine also the advantages of superior protection and attractive display. Have you thought of using them?

Along these lines, we have some *new* ideas which might be applicable to your products. We'll analyze your requirements and make suggestions, without obligation. By starting now, you can have a new package ready for production when materials and facilities are available. Ask us for details.

CONVERTERS — PRINTERS — LAMINATORS of FILMS and FOILS

THE

**DOBECKMUN**

COMPANY

CLEVELAND 13, OHIO

WESTERN SALES HEADQUARTERS • SAN FRANCISCO

OFFICES IN NEW YORK, BOSTON, PHILADELPHIA, CHICAGO AND LOS ANGELES • REPRESENTATIVES EVERYWHERE



# GAIR BY AIR

New York to San Francisco 17 hours—  
New York to Hongkong 44 hours. Dis-  
tance is no longer measured by miles  
but by minutes. Because weight is a  
first consideration, Gair products play  
a vital part in the field of ever narrow-  
ing horizons. New merchandising meth-  
ods, bringing an unprecedented need  
for Gair Corrugated Boxes—assure  
maximum air cargo at minimum tonnage.



Write for Booklet "Air Cargoes"

Save Waste Paper for war production

ROBERT GAIR COMPANY, INC., NEW YORK • GAIR COMPANY CANADA LIMITED, TORONTO  
Folding Cartons • Box Boards • Fibre and Corrugated Shipping Containers





## HOMECOMING

*We can talk hopefully now about the soldier's return.  
What a homecoming it will be for him . . .  
memories of war-weary, hungry faces still fresh . . .  
to find his loved ones well and strong—fit and healthy,  
because of America's great food program.*



*Hazel-Atlas Standardized Glass Containers are a factor  
in the success of this program.*

**HAZEL-ATLAS GLASS COMPANY, Wheeling, W. Va.**

# "What are we



# e waiting for ?

**LET'S GET OVER ONE BIG POSTWAR HURDLE  
BY GETTING GARDNER-RICHARDSON SPECIALISTS TO WORK ON  
OUR FOLDING CARTONS, NOW!"**

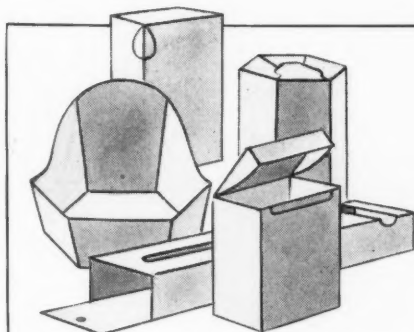
**S**MART MAN behind that desk. For he knows you can't come up, overnight, with the postwar package you're going to need *fast* when the green light comes from Washington.

The time to tackle those folding carton problems is now—*before* the rush. Before it's too late to experiment and test, check and double check. Yes, and before Gardner-Richardson specialists are swamped with last-minute calls for help.

What *are* your problems? Cartons need restyling, redesigning? Need more economical set-up and assembly? More efficient folding and sealing?

Like to improve "usage" qualities? Find a paperboard that will give your package better appearance or your product better protection?

Now...right now...is the time to put your problem up to Gardner-Richardson paperboard and folding carton specialists. A letter from you will get action. And without obligating you, of course.



During the last half century Gardner-Richardson has been responsible for many outstanding developments in folding boxes and specialties. While the production of the Gardner-Richardson mills and plants is completely sold up, the skill, experience and knowledge of its creative and technical staff are available to forward-looking managements interested in better packages for postwar delivery.

## **The GARDNER-RICHARDSON Co.**

**Manufacturers of Folding Cartons and Boxboard  
MIDDLETOWN, OHIO**

Sales Representatives in Principal Cities: PHILADELPHIA • CLEVELAND • CHICAGO • ST. LOUIS • NEW YORK • BOSTON • PITTSBURGH • DETROIT





# HUBBS HOUSES

*Can Help You*

## GET MORE BUSINESS

IN AMERICA'S  
NO. 1 MARKET

Nearly 50% of the Buying Power of the North American continent is concentrated in the area we serve. If you are not satisfied with your present distribution or if you are thinking of greater post-war sales volume in this productive territory . . . consider the advantages of our long-established connections and active, experienced selling force.

Perhaps we can help you introduce a new product or line. We shall be glad to explain our facilities to any mill or convertor.

#### CHARLES F. HUBBS & COMPANY

Lafayette Street Warehouse  
Beekman Street Warehouse  
NEW YORK, N. Y.

#### HUBBS & CORNING COMPANY

BALTIMORE, MD.

#### HUBBS & HOWE COMPANY

BUFFALO, NEW YORK

#### HUBBS & HASTINGS PAPER CO.

ROCHESTER, NEW YORK

#### CHARLES F. HUBBS & COMPANY

BRIDGEPORT, CONN.

#### INTERSTATE CORDAGE & PAPER CO.

PITTSBURGH, PA.

#### THOMAS J. NAGLE PAPER CORP.

HOLLIS, NEW YORK

#### HUBBS & HOWE COMPANY

CLEVELAND, OHIO

#### HOLLAND PAPER COMPANY

BUFFALO, NEW YORK

#### CHARLES F. HUBBS & COMPANY

TROY, NEW YORK

#### and in Canada

#### VICTORIA PAPER & TWINE CO., LTD.

TORONTO

#### VICTORIA PAPER & TWINE CO., LTD.

MONTREAL

#### VICTORIA PAPER & TWINE CO., LTD.

HALIFAX

#### GARDEN CITY PAPER MILLS CO., LTD.

ST. CATHARINES, ONT.

#### CANADIAN VEGETABLE PARCHMENT CO., LTD.

MERRITON, ONT.

*The*  
**HUBBS  
HOUSES**

For a  
"DISTRIBUTORSHIP  
that Means  
**LEADERSHIP**"  
contact the Hubbs House  
nearest you.

ESTABLISHED IN 1855

## Idea Corner

For Postwar Package Planners

**EGGS GO MODERN...**

**MEDICINE THAT'S EASY TO TAKE...**

**LOOK! THEY'RE NYLONS...**



**IDEA NO. 1** A hen turns out a good package through her own efforts. But see how these dehydrated eggs are packaged. This unit spells convenience to the housewife—plus eye- and buy-appeal.



**IDEA NO. 2** Here the idea is to measure out individual doses at the factory—assemble them in a *visible* package that instantly shows ease of use. The *right* package can be a good sales tonic.

### Basic Themes of Postwar Merchandising

Here are six fundamentals that will help to lower postwar distribution costs and speed up turnover. Use them to check *your* postwar package plans.

- 1. SELF-SERVICE:** Emphasis on self-selection and display value.
- 2. CONVENIENCE:** Size, shape, quantity, ease of use are predominant factors.
- 3. INFORMATIVE LABELING:** Need for concise information, terse selling message.
- 4. IMPULSE BUYING:** A high percentage of all buying done on impulse.
- 5. PROTECTION:** Adequate protection geared to rapid turnover.
- 6. VISIBILITY:** 85% of all buying done through the eyes. Visibility of primary importance in the package of the future.

Would you like to see more postwar packaging ideas? Just write: E. I. du Pont de Nemours & Co. (Inc.), Cellophane Division, Wilmington, Del.

# Du Pont Cellophane



Better Things for Better Living . . . Through Chemistry



**IDEA NO. 3.** Here's a package that lets the customer see what she's getting—and saves loss through damage from inquisitive hands. The purse-fitting size says, "You can take it with you!"

**VISIBILITY... a powerful force in modern merchandising**

IT'S WHAT YOU DO WITH CELLULOSE FIBRE THAT COUNTS



## Getting more magazines out of a tree

The war has brought many challenges to ingenuity—and as paper makers, we've had our share.

Take the scarcity of printing paper for example.

With supplies curtailed, magazines had to cut circulations—trim down the number of pages—or find ways to “get more copies out of every tree.”

That's where we came in. Could printing paper be made thinner than previous standards—and still be sufficiently strong and sufficiently opaque for printing type and pictures on both sides?

Our answer was—it could. And the emergency paper we made

is doing a good pinch-hitting job for many publishers and printers right now.

Maybe this paper will find no great use after the war. But out of the lessons learned in making it—and meeting other challenges—we'll be equipped to make our standard papers even better than they have been before.

We've been working with cellulose fibre—the raw material of paper—since 1900. For many years, we've turned out a thousand miles of paper a day. It's reasonable to hope that all this experience will prove helpful to users of printing in many new ways when the war is won.



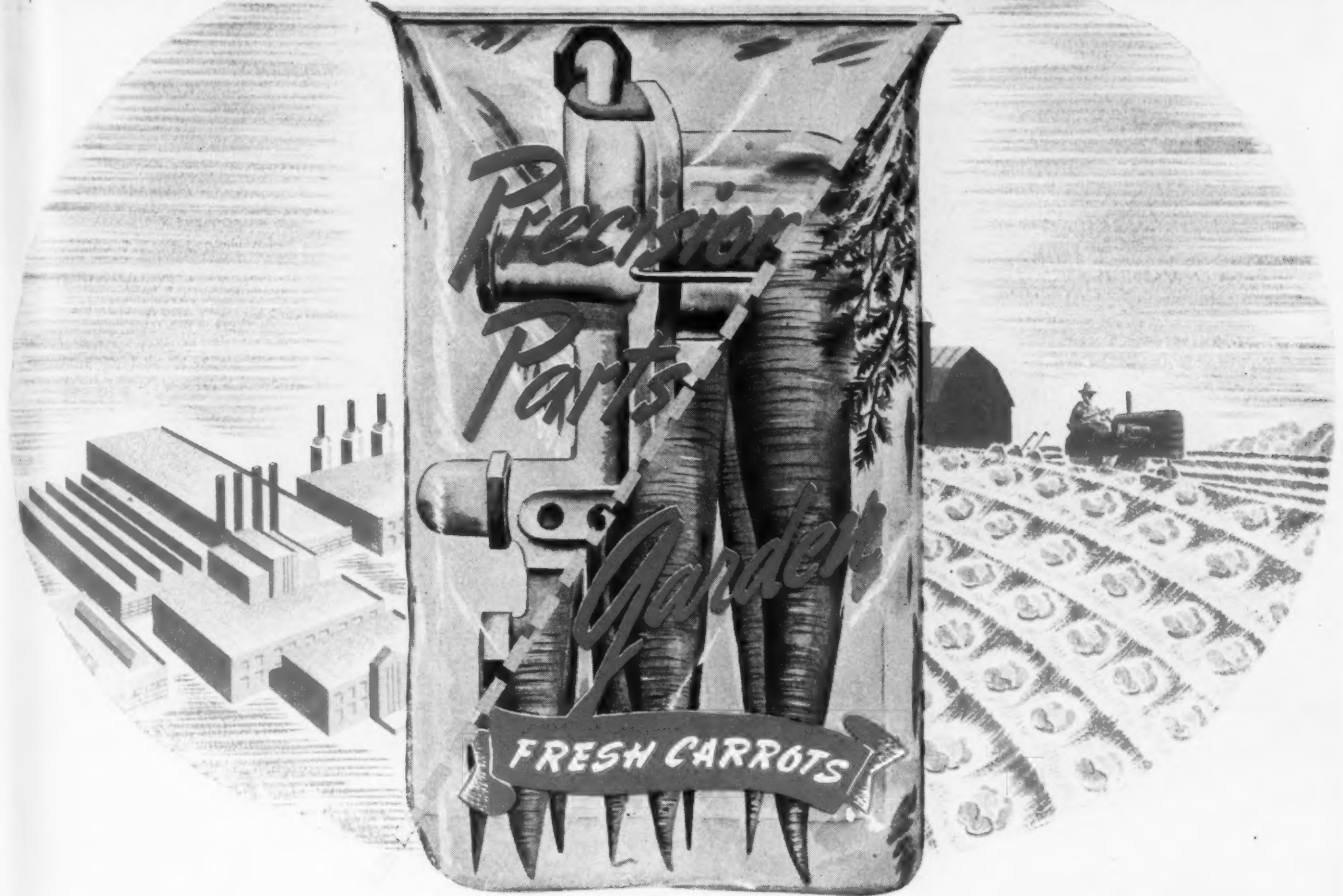
**OXFORD  
PAPER  
COMPANY**

230 Park Avenue, New York 17, N.Y.  
MILLS at Rumford, Maine  
and West Carrollton, Ohio

WESTERN SALES OFFICE:  
35 East Wacker Drive, Chicago 1, Illinois



When the packages of war come home . . .



### To protect the products of peace

During the war Shellmar has developed many new packages for our armed forces . . . packages never dreamed of before. Today these packages are veterans that have passed every brutal test in safely delivering

food and materials to our fighting men in every part of the world.

Naturally our production of these packages today is devoted entirely to the war. But someday . . . soon we hope . . . these war-time packages will merchandise and protect your peace-time products. It's not too soon to start planning for that day. Contact Shellmar now.



CONVERTERS OF

CELLOPHANE, PLIOFILM, CELLULOSE ACETATE, SARAN, FOILS, PAPERS, GLASSINE, LACQUER COATINGS, VINYLs

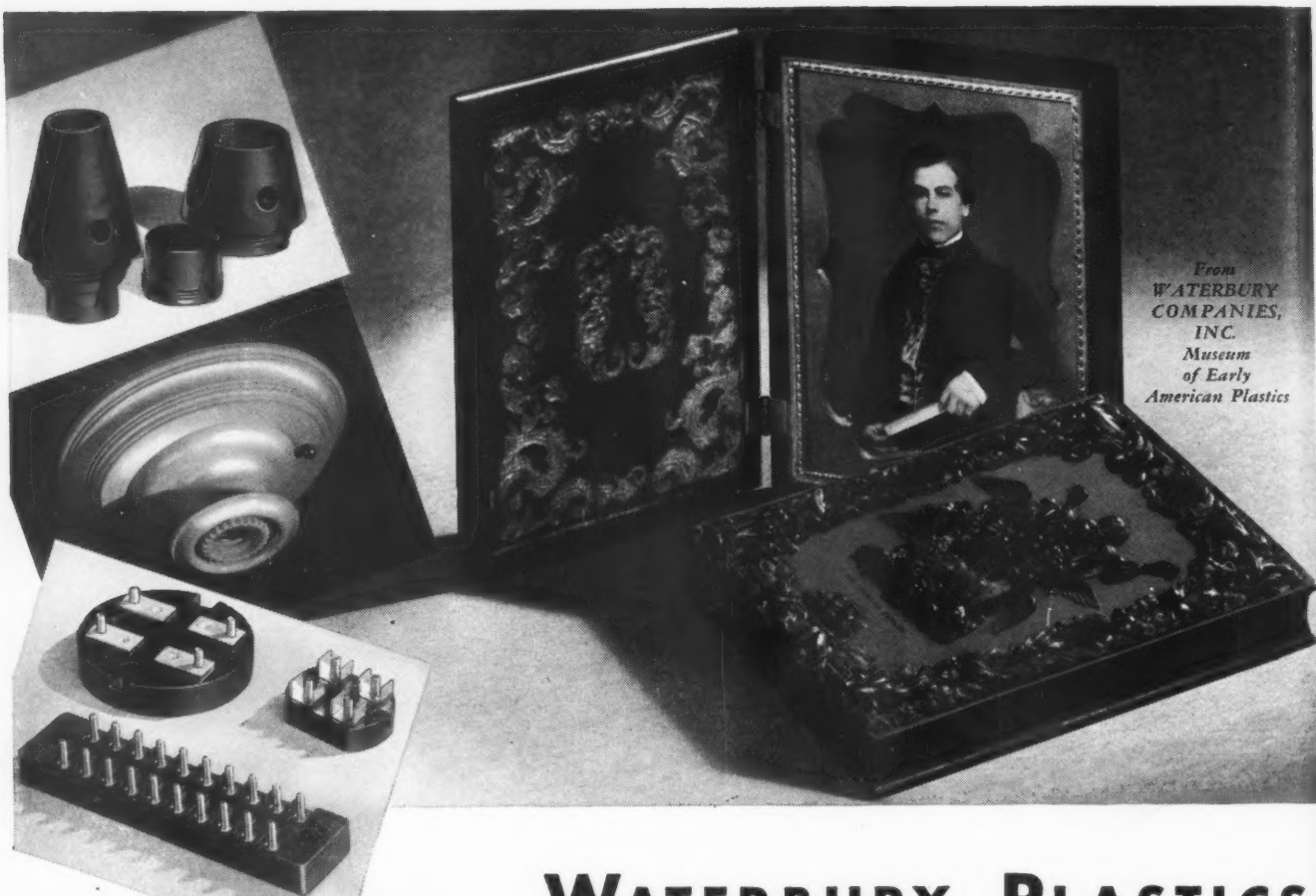
**SHELLMAR**  
PRODUCTS COMPANY



224 S. Michigan Ave.  
CHICAGO, ILL.  
MOUNT VERNON, OHIO  
PASADENA - CALIFORNIA  
3115 Empire State Bldg.  
NEW YORK, N. Y.



Our laboratory is equipped with every known device for testing your product and various packaging materials under actual conditions of packing, shipping and merchandising in every climate.



**PLASTIC MOLDING**  
**PLASTIC**  
**LIGHTING FIXTURES**  
**METAL SUNDRIES**  
**EYELETS · TOYS**  
**UNIFORM & DRESS**  
**BUTTONS**

**Our Engineers and Designers will work with you**

**INC**  
**1812**

**SOCIETY OF THE PLASTICS INDUSTRY**  
**SP**  
**AMERICAN**

## WATERBURY PLASTICS

### *Moldings of Merit*

When Louis Jacques Mande Daguerre of France perfected his photographic process in 1839, he little thought that it would lead to the development of a great American industry. Yet, out of the need to protect the sensitive Daguerreotype from fading, composition cases of remarkable beauty were created and that was the start of Plastic Molding in this country.

Waterbury Companies, Inc., then known as The Waterbury Button Company, in those pioneer days made buttons, mirror frames, checkers and dominoes of plastic material. Later on they molded quantities of phonograph records. Since those early days, newer plastics have been developed and their use has expanded into hundreds of industries, and countless applications now enter into our daily lives.

Today, Waterbury Companies, Inc., serves American Industry with a wide variety of plastic products, as well as with metal parts, lighting fixtures, buttons, toys and metal sundries.

Manufacturers working with this versatile company enjoy the advantages and economies that come from having their metal and plastic parts made in one plant under one responsibility; molded together when required, or assembled in complete units.

Look to this progressive company for your plastic and metal needs: Six complete manufacturing divisions, three laboratories, experienced engineers, designers and technicians are ready to serve you. When writing address Dept. J.

**BUY MORE WAR BONDS . . . HASTEN VICTORY**

**WATERBURY COMPANIES, INC.**  
 Formerly Waterbury Button Co., Est. 1812  
 WATERBURY, CONNECTICUT

# THE *Beauty* OF A PACKAGE THAT SELLS



PACKAGES BY RITCHIE  
PROVE THAT BEAUTY SELLS

Few products may be more *unlike* than the two shown above. But *buyers of both* listen to radios, attend movies, keep up with the Joneses, and choose nothing—not a necktie, a hat, a home to live in, nor a desk to work at—without regard to *how it looks!*

Whether buying a new car, a packaged product or an apple—people feel that *outward* good appearance is a sign of *inward* goodness—a mark of quality.

That's why leading merchandisers come to Ritchie for *eye-appealing* packages.

Call it "good design," "attractive appearance," or what you will—*beauty SELLS!* A hydraulic jack—sold to garage-men, presumably interested in function only—is given

more interesting shape, more attractive color—and sales increase 75%. The *jacket* only of a hot blast stove is redesigned for *better appearance*. Its sales double. One Ohio manufacturer's health scale, when redesigned, matched *ten* former years' sales in *one!*

In a product or its package—whichever meets the eye—beauty is a force that moves people to favor that product over others of its class!

That is why, in *every* package by Ritchie, whether it contains industrial tools or imported perfume—you will always find, in its lines, in its proportions, color or general design, a strong eye-pleasing quality—elements of beauty.

## HOW TO GET A BETTER PACKAGE AT LESS COST

Let Ritchie design a package for you and it will have beauty *more than skin deep*. It will have the right material and structure for its job. It will be practical, convenient to use, easy to handle, to stack and display. It will proclaim your product-identity. It will be memorable and attractive. And Ritchie's expanded, war-developed facilities for volume postwar production assure its low cost. Let Ritchie demonstrate how you can get a better selling package. *Write us today.*

W. C.

*Ritchie*

AND COMPANY

8847 BALTIMORE AVENUE • CHICAGO 17

Set-Up Paper Boxes • Fibre Cans • Transparent Packages

NEW YORK • DETROIT • LOS ANGELES • ST. LOUIS • MINNEAPOLIS



# "SPLENDID COOPERATION"

Established 1760



CABLE ADDRESS  
"LORILLARD"  
A B C & 5th EDITION  
AND BENTLEY CODES

*P Lorillard Company*  
INCORPORATED

TOBACCO-CIGARETTES-CIGARS

119 West 40th Street

New York

June 21st, 1944

Riegel Paper Corporation,  
342 Madison Avenue,  
New York 17, New York.

Gentlemen:-

We believe this to be a propitious time to express our appreciation for the splendid cooperation extended by your organization in the handling of our requirements.

We are cognizant of the difficulties under which your mills have been obliged to operate in the existing National Emergency and while it has not been possible to maintain inventory as in normal times, it is gratifying to say that we have at no time found it necessary to curtail operations because of your inability to keep us supplied.

Because of the critical paper shortage, we have made quite a few changes in the wrapping materials used in the packaging of our products in cooperation with the program for conservation, and the assistance rendered by your staff in making this possible is much appreciated.

We fervently hope that the day of Victory is not too far distant and that our relationship in the years to come will be as pleasant as in the past.

Yours very truly,  
P. LORILLARD COMPANY

*J. V. Mecca*  
Manager  
Purchasing Department

This is the first in a series of ads in which our customers will do the talking — for there is no better time than a "seller's market" to gauge the true worth of any supplier. Necessary wartime restrictions may prevent us from helping you today with your greatest need — current deliveries — but we can help you now to plan for tomorrow's packaging changes.

**RIEGEL PAPER CORPORATION**

342 MADISON AVENUE • NEW YORK 17, N. Y.

Manufacturers of over 230 different protective packaging papers — plain, printed, waxed, lacquered, laminated, embossed—in every case perfected to meet our customers' individual requirements.

# Stå emot



Norway's heroic resistance is aided by equipment parachuted in paper packages. • Military and other Allied needs necessarily cause limitations at home.

CONTAINER CORPORATION OF AMERICA CHICAGO—AND 21 OTHER CITIES



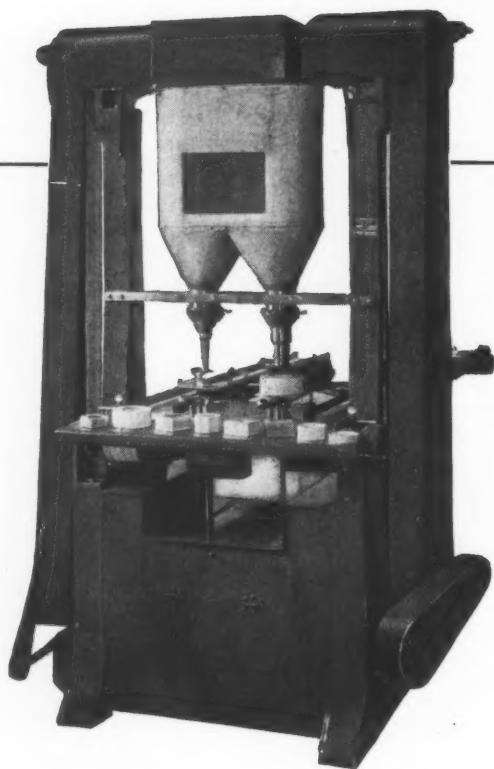
AUGUST • 1944

37

# DO YOU PACKAGE —

*cosmetics,  
drugs,  
chemicals,  
foods*

## in powdered form?



THE MODEL MH BOND  
FILLING MACHINE

If you have a wide range of sizes, or if your production is not sufficient to warrant a fully automatic machine, the semi-automatic Bond Filling Machine is ideally suited to your requirements.

This twin-station semi-automatic can be equipped to volume fill, gross weigh or pack. It can be used for any type of container—bag, envelope, carton, jar or can. It is easily convertible from one size to another.

The Bond Machines are sturdy and dependable, giving fine service even on abrasive materials. They are accurate and smooth in operation and are widely known for their steady service over the years.

Send us samples and particulars on your production requirements and we will gladly send you information on the Model MH or on any of our other semi-automatic or fully automatic Bond Filling Machines that we recommend for your job.

## UNITED STATES AUTOMATIC BOX MACHINERY CO., INC.

Divisions:

National Packaging Machinery Co.—Cartoning Machinery Corp.

22 Arboretum Rd., Roslindale 31, Boston, Mass.

Branch Offices: New York, Cleveland, Chicago

Los Angeles:  
Krugh Equipment & Supply Co.





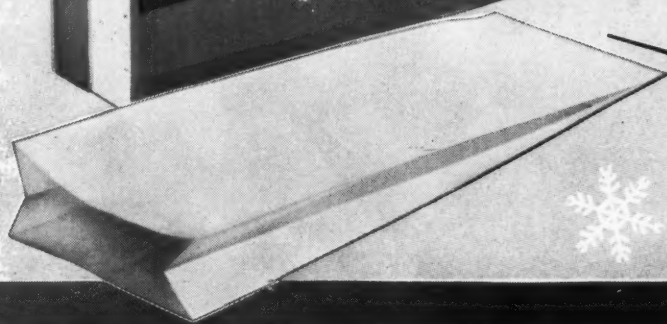
ADVERTISEMENT No. 6 OF A SERIES DEMONSTRATING THE DIVERSIFIED RANGE OF PACKAGING MATERIALS USED BY MENASHA TO RENDER A

## Complete Packaging Service



## FREEZTEX LOCKER PACKAGES

For Home and Locker Freezing  
of Fruits and Vegetables



**PROTECTION** against dehydration is the No. 1 requirement of frozen food packaging. Maintaining that protection under all storage and handling conditions presents a major technical problem which is solved by the FREEZTEX package and its heat-sealing MARAPAK bag. This special bag, made of high wet-strength paper, is coated with material which provides a *continuous film of protection*. No cracking of the coating as the frozen package is handled; no brittling and breaking in dry, sub-zero temperature. This unbroken protection, developed by Menasha for commercial processors of frozen foods, is now adapted to home and locker plant packaging of fruits and vegetables. Another example of a package "built for the job." Another reminder that Menasha has the skill and experience with which to find a practical answer to your special problem of packaging.

**THE MENASHA PRODUCTS CO. • MENASHA, WIS.**

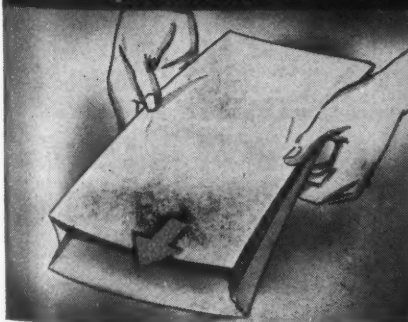
Division of Marathon Paper Mills Company

Branch Offices: NEW YORK, CHICAGO, LOS ANGELES, SAN FRANCISCO



MARAPAK'S inner coating heat-seals and fuses into an unbroken protective film.

MARAPAK heat-seals easily, quickly — is ideal for home kitchen filling.





# Saran Film

**KEEP**

## OTHER DOW PACKAGING MATERIALS INCLUDE

### *Ethocel Sheeting*

#### **FLEXIBLE AND TRANSPARENT**

This rigid, yet flexible, transparent packaging material is exceptional because of its extreme toughness . . . a quality derived from its base—Dow Ethylcellulose.

It retains all its serviceability and sales appeal despite shelf wear and handling. These qualities, plus its ease of fabrication, point to an early resumption of its high place in rigid transparent packaging.

### *Stripcoat*

#### **DIP IT • SHIP IT • STRIP IT**

Stripcoat is a hot melt dip which protects metal parts with a tough, resilient skin that is quickly applied, sets immediately, and is removed easily by slitting and stripping.

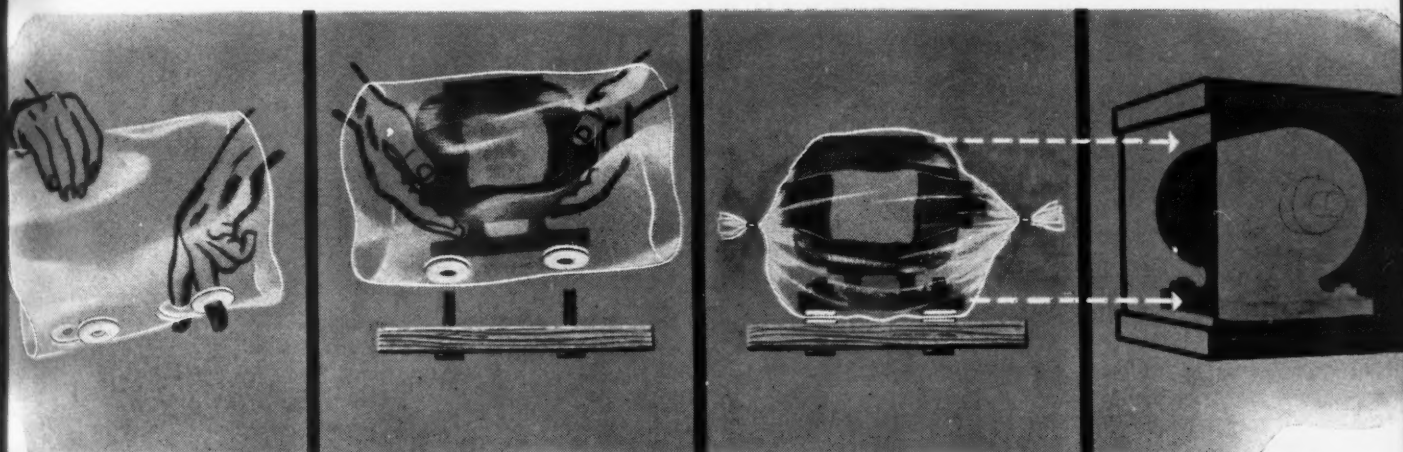
Stripcoat will be widely used to protect automobile parts and similar products during transit or while lying on dealers' shelves.



# Pack Up "Tomorrow" With Saran Film

Some one of these tomorrows—and we hope it's an early one—Saran Film will return from the war. It will be a triumphant homecoming . . . because this tough, moisture-resisting plastic film has served well in protecting our tools of war in all parts of the globe. And it will be a hearty welcome, too—for the packaging industry is already anticipating many new jobs for Saran Film in peacetime . . . dressing

many different products in eye-appealing packages that are chemically resistant and keep moisture in or out . . . protecting motors and other equipment by Method II packaging as illustrated. Undoubtedly, a material of such outstanding qualities will fit into your postwar packaging plans . . . certainly it merits investigation now for possible inclusion in any plans you may be making for tomorrow.



## MOISTURE IN ITS PLACE

Saran Film shares some of its characteristics with other packaging materials. It is transparent, for example; but so are many others, even if they don't possess the brilliancy of Saran Film nor its soft, draping beauty. It is as tough, and it probably is more flexible, even at low temperatures.

But, important as they are, none of these qualities constitutes the real basis for Saran Film's claim to leadership in the packaging field.

That claim—and it's bound to make Saran Film a winner in tomorrow's packaging—is based on a truly unique quality . . . its really amazing ability to act as a moisture barrier—to keep moisture in or out.

In this quality, Saran Film stands supreme . . . for tests prove it to be three times more effective than any comparable product.

This outstanding characteristic—plus its many other features—will open the door to many new applications for Saran Film. The postwar packaging of countless consumer products requiring protection as well as eye-appeal will come within the scope of Saran Film when conditions permit its general application.

In the meantime, why not get acquainted with Saran Film? Just write Dow for complete details.

**THE DOW CHEMICAL COMPANY • MIDLAND, MICHIGAN**

New York • Boston • Philadelphia • Washington • Cleveland • Detroit • Chicago  
St. Louis • Houston • San Francisco • Los Angeles • Seattle





# WE'RE PLANNING GREAT THINGS FOR *The Package of Tomorrow!*



We, of the Sefton Fibre Can Company, have great plans for your post-war packages. Designed to be different, they'll be created to suit your needs by being *functional* and *attractive*, too! We're looking ahead today to the time when we can bring you our dramatic Package of Tomorrow!

**SEFTON**  
**FIBRE CAN COMPANY**  
ST. LOUIS • • • • NEW ORLEANS

**DISTRICT OFFICES:** Los Angeles San Francisco Denver Tampa Chicago Des Moines New Orleans Boston Detroit Kansas City St. Paul  
Omaha New York Cincinnati Cleveland Oklahoma City Pittsburgh Memphis Nashville Dallas Houston Salt Lake City Seattle



**Amazingly accurate measurements assist  
research's quest for better glass**

PERHAPS no improvement in the making of fine glass is more striking than the amazingly accurate and delicate measurements now employed in weighing ingredients. For generations, materials were portioned out by "rule of thumb"—a cartload of that, a shovelful of this.

All that has been changed. Although glass is produced in larger quantities than ever before, every ingredient is measured accurately, by devices of extreme precision. To maintain this same relative accuracy in small laboratory batches weighing a pound or less, minute and precise measurements are necessary. In Armstrong's glass laboratories, for exam-

ple, the balances in daily use for weighing experimental batch ingredients, and for other experimental work, are so sensitive that they can actually measure the weight of initials penciled on a piece of tissue paper! (Those in the picture weigh 0.0000704 ounce.)

Naturally not all measurements in glassmaking, even in the laboratories, are carried out to a fraction of an ounce. But it nevertheless is true that

## HOW MUCH DO YOUR INITIALS WEIGH?

in Armstrong's glass factories, where commercial batches are mixed in ton quantities, ingredients are measured with a care and accuracy undreamed of in glassmaking even a few years ago.

This meticulous care and attention to detail, governing all Armstrong's work, is one of the big reasons for the consistently high quality of Armstrong's ware.

Other unusual stories of the care, experience, and skill that go into the making of fine glass are told in Armstrong's illustrated booklet, "Men and Glass." For your free copy, write to the Armstrong Cork Co., Glass and Closure Div., 5908 Prince Street, Lancaster, Pa.

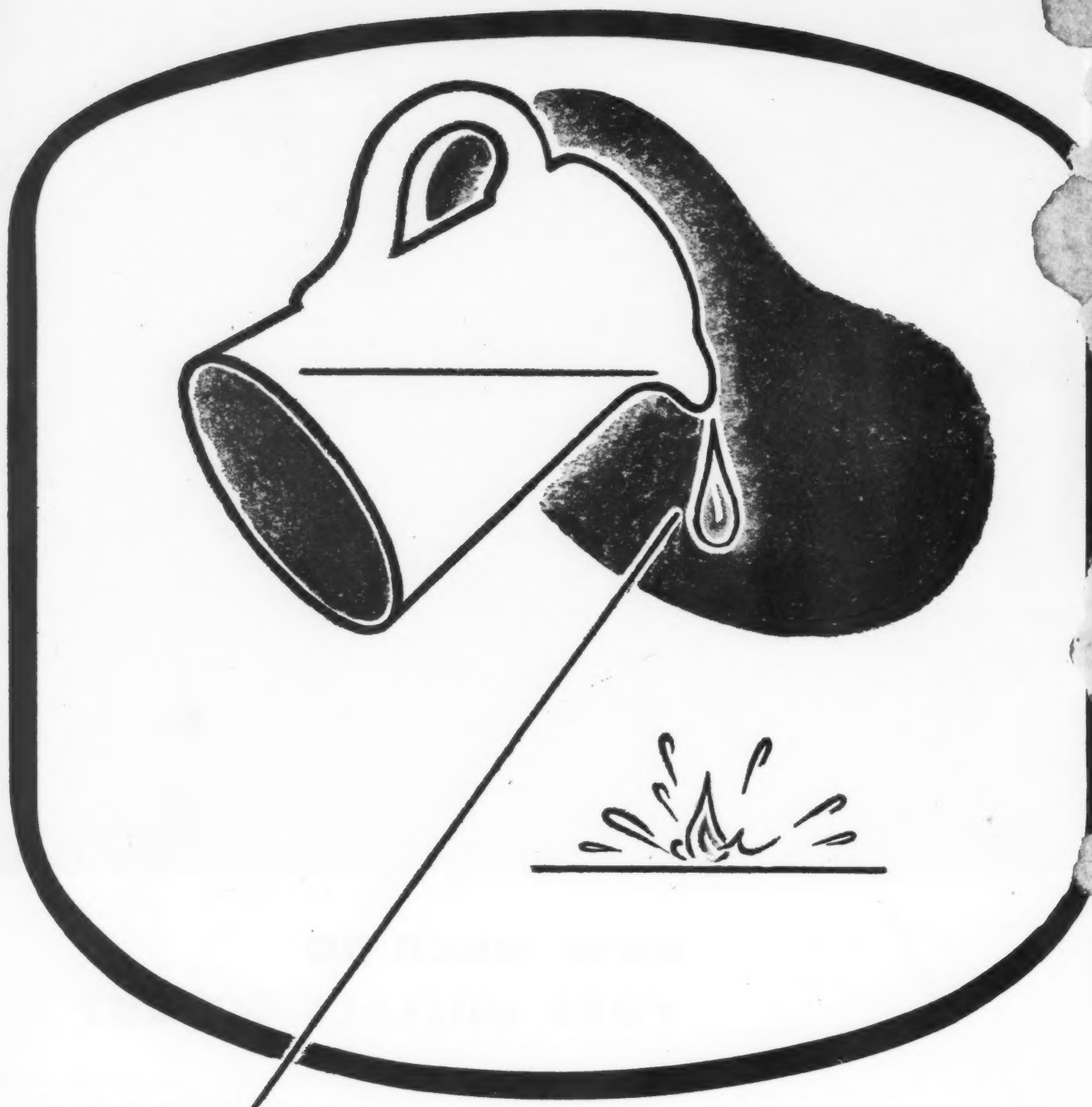


## ARMSTRONG'S GLASS



and **ARMSTRONG'S  
CLOSURES**





## **D**O YOU BELIEVE A WATER-DISPERSED MATERIAL MIGHT ANSWER YOUR PROBLEM?

We disperse synthetic rubbers, resins, gums and many other rubber-like materials in water. Let us know your requirements and we probably can develop a water-dispersed elastomer or composition that will meet your particular need.


### **Dispersions Process, Inc.**

*under management UNITED STATES RUBBER COMPANY*  
*symbolizing research and development*  
*in water dispersions*



1230 SIXTH AVENUE, NEW YORK 20, N. Y.





Excerpts from a letter written May 30, 1944, by Chaplain Harold I. Saperstein. The full letter described services conducted in turn by a Catholic, a Protestant, and a Jewish Chaplain at an American cemetery somewhere in Italy—a lesson in Democracy for all who attended.

".....The service was not yet completed. Although the natives gathered were almost exclusively Catholic, among the boys buried there were Protestants and Jews as well.

The rich full notes of the Cantor—a G. I. private—intoned 'O Lord, what is man that Thou takest account of him.' They listened as I read the moving words of the 90th Psalm, offered my prayer, and recited the 23rd Psalm with its simple faith in which one senses the spirit, not of a particular creed, but of a suffering, yet trusting humanity. Then the deep voice of the Cantor again filled the air.

As the last echo died away, the orders of the commanding officer were heard, and the honor guard marched to its position before the casket. Ready, aim—the rifles were pointed upward—fire! Twice more the volleys rang out. The bugler advanced, paused for an instant with his bugle at his lips, and sounded taps ... A distant bugle far across the hills repeated the clinging notes like an echo. Then the American band struck up the Garibaldi hymn. The ceremonies were over."

#### BONDS FOR LETTERS!

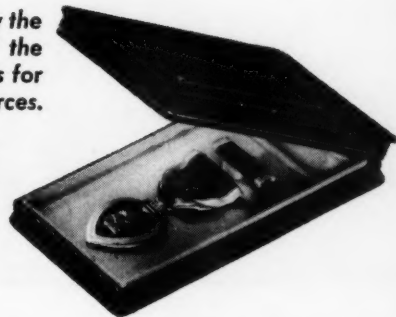
TWO \$25.00 WAR BONDS WILL BE AWARDED EVERY MONTH FOR EACH LETTER PUBLISHED.

Have you received a letter from a serviceman illustrating the spirit of cooperation and understanding which unifies America's fighting men of all faiths, races, backgrounds? If so, send it to Arrow Mfg. Co. You and the writer will each receive a \$25.00 War Bond if letter is accepted for publication. All letters will be returned.

ONE OF A SERIES OF ACTUAL STATEMENTS FROM MEN WITH THE ARMED FORCES, EXPRESSING THE DEMOCRATIC IDEAL—A POWERFUL WEAPON IN WAR, A PROMISE OF ENDURING PEACE FOR ALL MANKIND.

Arrow is proud that it is today the country's largest supplier of the boxes which hold the medals for the heroes in our Armed Forces.

**Arrow**  
BOXES AND DISPLAYS



# *Plastic Packages, Closures & Package Parts*

## *from ready-made* **STOCK MOLDS**



*Order Direct from this Book*

The Stock Mold Catalog of ready-made molds for packages, closures, package parts and extrusions and laminates, many of which can be adapted to packaging use, is now ready!

This book is complete and completely *new*.

It contains nearly 1600 stock molds, each illustrated by a molded piece. Each item is indexed with name and address of supplier. You can order direct.

Also contains: 185 standardized extruded shapes, many of which have fine packaging potentials. Includes tubes. Fully indexed.

The laminates section also contains unique possibilities for present and postwar packaging.

Every item is illustrated, numbered, indexed. Complete directory section allows you to use this book as a catalog from which you may place direct orders.

PRICE **\$5** PER COPY

*New 1944*

## **STOCK MOLD BOOK**

122 East 42nd Street

New York 17, N. Y.

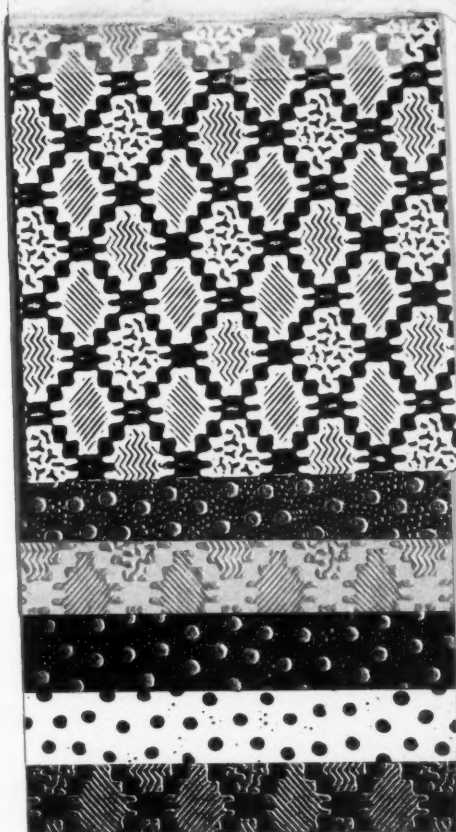


*Bullseye*

**BY AN IMPORTANT  
SOURCE OF SUPPLY**

Customers appreciate a fine wrap or a good-looking box covering even more today than they did when such things were widely used. Today's smart packagers are taking advantage of this fact by giving consumers more attractive packages.

We are cooperating wholeheartedly with current packaging requirements within the limitations of standardization and paper conservation. By eliminating waste and unnecessary consumption, we are able to provide something for everyone. The samples represent our Brillette and Lustrette Papers.



**KUPFER BROS. CO.**

NO. 4 ASTOR PLACE

NEW YORK 3, NEW YORK

**KUPFER BROS. PAPER CO.**

145 WEST HUBBARD ST.

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# Shatterproof...Seamless—



*-and therefore-BEST*  
for **POCKET** or **PURSE** use

## Clearsite<sup>\*</sup>

CONTAINERS provide full-time protection for your product at all times. Whether its contents were primarily intended for stay-at-home use; for train, 'plane or outdoor use—it should survive handling!

### FEATHER-LITE....COLORFUL....LABELED IN PROCESS OF MANUFACTURE

CLEARSITE is better-looking—it is also resilient, sturdy, and withstands use or misuse which would ruin the old type of bulky and breakable containers. That is an important consideration when you serve a nation that is "always on the go."

<sup>\*</sup>Registered U. S. Pat. Off.

Hundreds of items used as daily requisites need the protection of CLEARSITE. They'll soon recognize that products packed in CLEARSITE, stay with them until consumed!

Our Package-Engineering staff will gladly collaborate with you!



## CELLUPLASTIC CORPORATION

40 AVENUE L

NEWARK, N. J.

WEST COAST REPRESENTATIVES. CONTAINER SERVICE CO., 1266 North Western Avenue, Los Angeles 27, Cal.

# LIFE... in PAPER BAGS



Ever increasing quantities of the "miracle drug from mold" are being shipped in our bags. Precious penicillin is safely packaged. ☆ Water-tight, weather-tight Central States bags are carrying other important products all over the world. ☆ Huge, paper "raincoats" for protecting tanks and anti-aircraft guns are rolling off our production lines. Countless items protected by Central States bags are reaching their destinations through literally "hell and high water" ☆ Steady, peace-time expansion gave our plant engineers and our trained workers the know-how to meet previously unheard of packaging requirements.

We invite you to use this stepped-up knowledge and experience on your present or postwar packaging problems.

**CENTRAL STATES PAPER & BAG CO.**  
2600 N. Broadway, St. Louis 6, Mo.

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520 N. Michigan Ave.

**NEW YORK**  
489 Fifth Ave.

**DETROIT**  
1951 East Ferry St.

SHOWBOX DIVISION . . . America's Foremost Manufacturers of Rigid, Transparent Containers . . . For Postwar "Impulse Buying"

# Preliminary Announcement About A New Sandwich Wrapping Machine

*Peanut Butter Crackers • Fig Bars • Cookies, etc.*

**T**HERE has been perfected a machine which automatically wraps, heat seals and affixes the labels on the ends of the standard five cent peanut butter cracker type sandwich. The machine also may be used for wrapping fig bars, cookies and other similar products.

A working model of the machine has proved itself under actual operating conditions in a nationally famous plant. We plan to begin manufacturing a limited number of the machines on approved orders within the very near future.

You are invited to write for further details. It would be helpful if you would send us samples of the products for which you are interested in securing a wrapping machine.

Or, if you care to visit personally or send a credited representative, our "idea into action staff"—our research and engineering department—will be happy to show you the model machine in our Durham, North Carolina plant.

**WRIGHT'S** *Automatic  
Machinery Company*

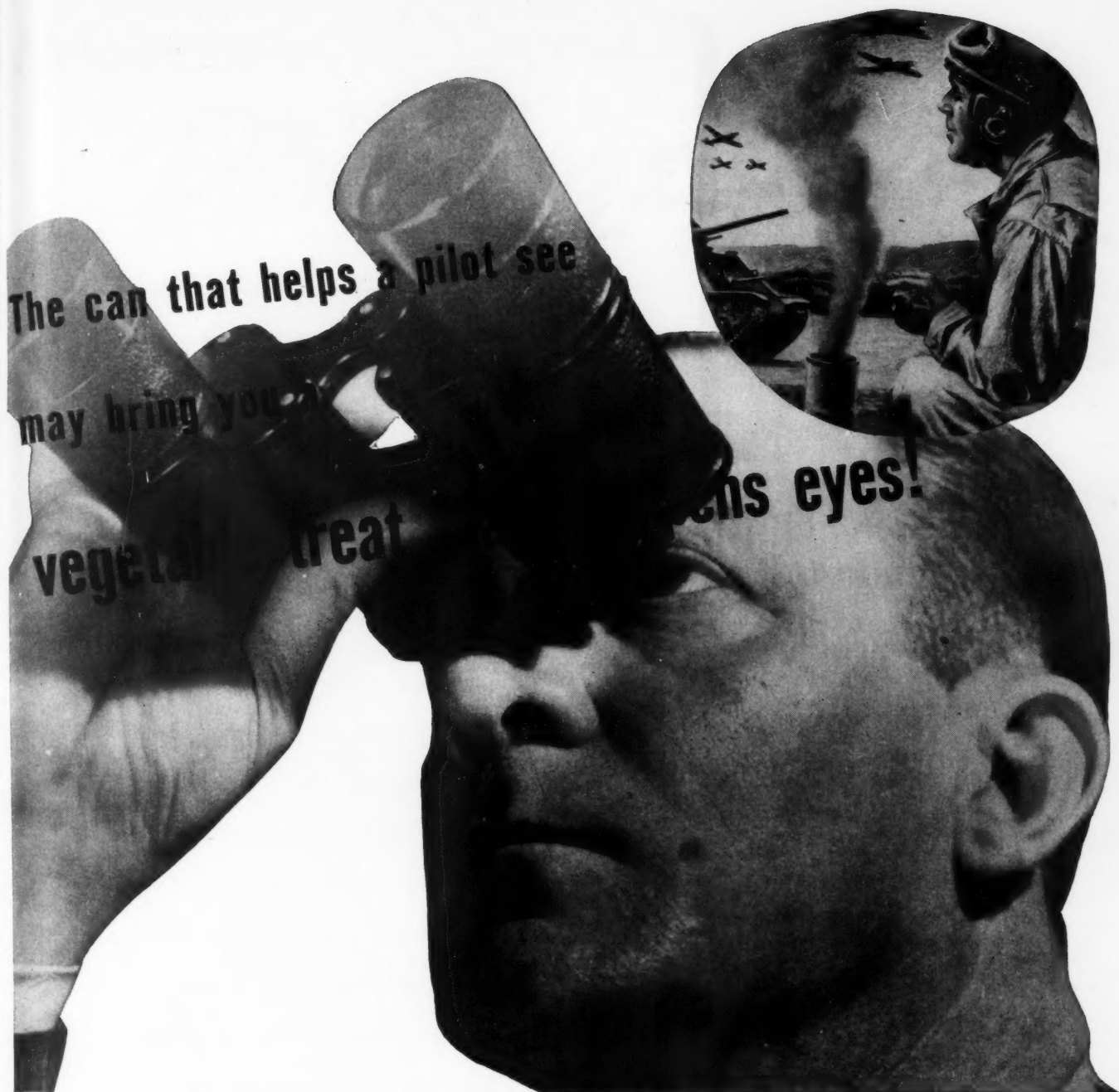
300 Calvin Street, Durham, North Carolina

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*"Specialists Since 1893 In Putting Labor Serving Ideas Into Action"*

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The can that helps a pilot see  
may bring you  
vegetable treat  
opens eyes!

● What is the can? And what's the new vegetable treat? First the can...

When a pin on this can is pulled, colored smoke billows out. Ground forces use these smoke-puffs to signal air support . . . to help pilots see where troops are located.

Which brings us to *your* eyes. If you have trouble seeing at night, it may be because of a deficiency of the night-vision vitamin A. Continental research has developed a process to provide this vitamin—in a delicious vegetable treat called "carrot chips."

These tasty carrot chips will come to you in cans some day soon. So will many other vegetable delicacies you

can't get now. And, of course, your good old familiar vegetables will continue to come in cans. You'll enjoy all their healthful goodness and fresh garden flavor because cans *protect* and *preserve*.

To do our war job we've developed new ideas and new skills, too. That's why as we look ahead we see *new* and *better* things in Continental cans.

**POST-WAR PLANNING:** We'll be glad to discuss future uses or improvements of your product or package and help in your post-war planning. Write Post-War Planning Dept., 100 E. 42nd Street, N.Y.C., or Continental Can Company of Canada, Limited, Montreal.

**CONTINENTAL CAN COMPANY**  
NEW AND BETTER THINGS IN CONTINENTAL CANS

Awarded to Plant 78,  
Chicago • Illinois



SAVE TIN CANS—HELP CAN THE AXIS

- TO QUOTE A LEADING  
PLASTICS ENGINEER...

**verbatim**

**FRED S. CARVER**  
HYDRAULIC EQUIPMENT

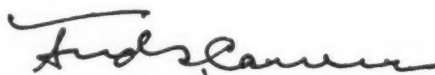
TELEPHONE  
WALKER 5-5046

345 HUDSON STREET  
NEW YORK

CABLE ADDRESS  
FREC ARVER


"Modern Plastics, it seems to me, has from the very beginning proved itself the main and co-ordinating influence in bringing plastics interests together - and, as I see it, really sold the industry to itself.

During the years, Modern Plastics has become recognized as the one publication to cover, collect and help to make better known the problems, products and techniques of the field. It has always presented itself as a journal of importance and character where the best plastic minds meet. Editorially and promotionally, it has earned both the readers' and advertisers' respect."



Fred S. Carver

**M**ODERN  
**P**LASTICS MAGAZINE

MEMBER AUDIT BUREAU  
OF CIRCULATIONS 

Published by MODERN PLASTICS, INC.

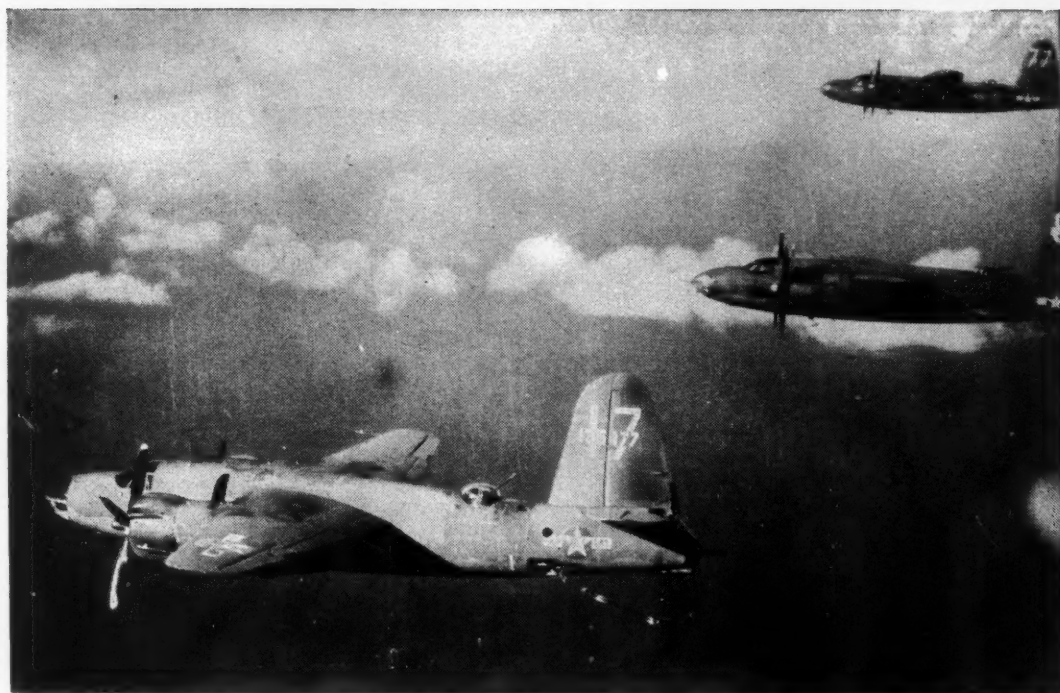


122 EAST 42nd STREET, NEW YORK 17, N.Y.

Helping to

# Package Victory

Official Photo  
U. S. Air Forces



*The B-26 Martin Marauder bomber in the foreground had its left engine shot out by German flak while attacking Rocca-secca Bridge on the Italian front. To lighten the load, the order was given to throw out everything removable. Photo shows ammunition belts being hurled from a gun position. The bomber returned safely to its home base.*



Abie, the ABC man,  
will be ready to  
s-t-r-e-a-m-l-i-n-e  
your Packaging Dept.

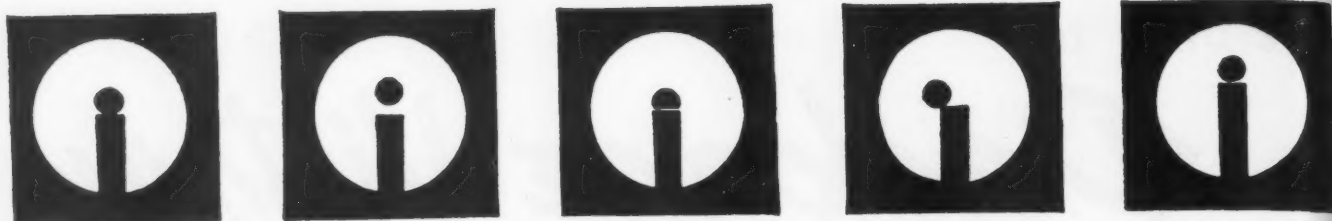
New machine tools, new techniques . . . employed now in producing vital precision parts for Martin B-26 Marauders and for heavy ordnance . . . promise better and more efficient packaging machines after Victory.

In the competitive postwar period ahead, new, sensational developments of the ABC Engineering Staff will solve many problems for the manufacturers of packaged products.

# ABC

**PACKAGING MACHINE CO.**  
QUINCY, ILLINOIS





*These diagrams represent possible positions of the front sight and bullseye as they appear through the rear sight of the rifle. Only one is correct . . . the position on the extreme left.*



## Aiming a rifle . . . ON PAPER!

To the marksman, aiming a rifle is so obvious that it doesn't need explanation . . . To the novice on the range, under tension to make good, distracted by noise, rifle kick and instructions, the relationship of front sight, rear sight and bullseye are anything but obvious. A beginner often wasted his first fifty shots before he knew *what to look for in his sights!*

A general responsible for the training program had the idea that much of the problem could be solved before the soldier went to the firing range . . . Eventually, through channels, the idea reached Einson-Freeman. The Sighting Device shown here represents our solution.

With this device the recruit who has never aimed a rifle knows what to look for before he goes to the range; can visualize all the wrong relationships between sights and target—as well as the correct one.

After the Sighting Device was

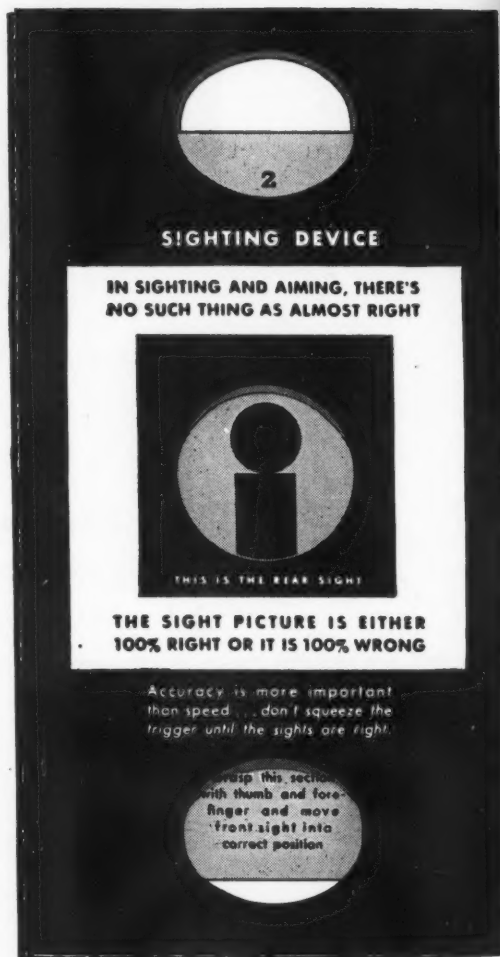
introduced, first scores showed an obvious improvement. Accuracy was developed in less time. The old American tradition of individual, accurate, and effective firing has been well sustained by the A U S. Millions of rounds of ammunition have been saved the taxpayers.

**A**LTOGETHER Einson-Freeman has developed and produced more than a dozen functional training aids for both the Army and the Navy. These training aids simply involve getting a specific story across to a specific audience . . . added a valuable new chapter to Einson-Freeman's long experience in visualizing and presenting product stories to the public, salesmen, distributors or workers. And from now on, Einson-Freeman can bring a lot more to the premium, display, packaging and the merchandising problems you bring to us. We welcome inquiries.

**EINSON-FREEMAN CO., INC.**

 **BULLS-EYE LITHOGRAPHERS**

STARR & BORDEN AVENUES, LONG ISLAND CITY, NEW YORK



*Movable tabs inside stiff enclosure control visual images of front sight and target. Other side has adjustable gauges for teaching windage and elevation.*

NO, INDEED-BUT  
IT IS TO YOUR  
ADVANTAGE  
TO DO SO

IF I BUY GLASS  
FROM YOU MUST I BUY YOUR  
CLOSURES, TOO-OR VICE VERSA-  
MR. WILSON?

Anchor Hocking offers a complete line of standardized glass containers of every size and type, all light, strong, safe and economical—a container for every conceivable packaging purpose. And among the 11 types of Anchor metal and molded caps there is one best suited to your purpose, whether you pack your products hot or cold, with or without vacuum, sterilize or process. While both containers and closures are available separately, it will pay you to rely on Anchor Hocking for your *complete* package; for then the responsibility for your container and closure requirements is centralized in one reliable firm; supply and service are coordinated; time and money are saved; and the facilities of our completely equipped Experimental, Packaging Research, and Engineering Laboratories are available to you.

"Meet Corliss Archer" every Thursday Evening, entire coast-to coast network CBS

**W. F. WILSON**, one of Anchor's ablest and most popular men, has been a member of the Anchor family for 17 years.

**ANCHOR  
HOCKING**



GLASS & CAPS

ANCHOR HOCKING GLASS CORPORATION LANCASTER, OHIO

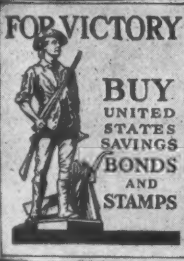


# IT'S AN A<sup>+</sup> PAPER

**SHERMAN V-28**  
SAFER PROTECTION FOR METAL PRODUCTS

A<sup>+</sup> in three important ways! A grease-resistant, non-corrosive paper built to meet exacting government specifications\* for Grade-A papers PLUS EXTRA GREASEPROOFNESS: over 1800 seconds compared to the required 1200 seconds! PLUS the extra protection of a CORROSION INHIBITOR . . . more than non-corrosive, it's ANTI-corrosive! PLUS MOLD-INHIBITOR protection!

\*100-15 (formerly AXS-840-1) and AN-P-12A.

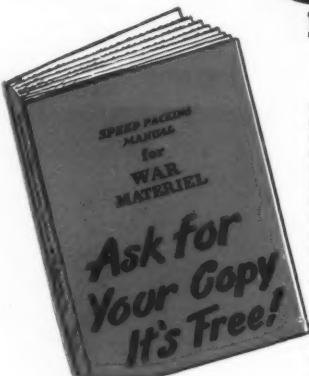


Spacer rings for the powerful Wright Whirlwind and Cyclone engines being wrapped in the protective V-28.

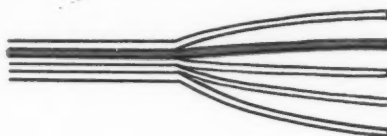
## SHERMAN MAKES A GREAT LINE OF PROTECTIVE PAPERS

Grades A, C, BE. Types I, II and III  
Corroflex, the Flexible-Cushion Wrap

The Sherman line also includes many outstanding paper products for baking and food packaging.



## 5-FOLD PROTECTION



MOLD INHIBITOR  
CORROSION INHIBITOR  
NON-CORROSIVE KRAFT  
RESIN LAMINANT  
PLASTIC FILM

It takes five different kinds of protective mediums to achieve the A<sup>+</sup> qualities of Sherman V-28. Each has a vital part in achieving the extra-strong, extra-safe protection of this great A<sup>+</sup> paper!

## MEETS GOVERNMENT SPECIFICATIONS

AN-P-12-A, 100-15: Grade A, Type II

Sherman V-28 meets or surpasses all Government Specifications for Grade-A papers, with the high strength required for the Type II group.

**Sherman**  
PAPER PRODUCTS CORPORATION  
Newton Upper Falls 64, Massachusetts  
DISTRIBUTORS IN 115 MAJOR CITIES

## ASK FOR FREE TRIAL

Gentlemen:

Certainly, we're interested in an A<sup>+</sup> protective paper! Please send a sample roll of Sherman V-28 for free trial. Also, send a free copy of the big War-Packing Manual.

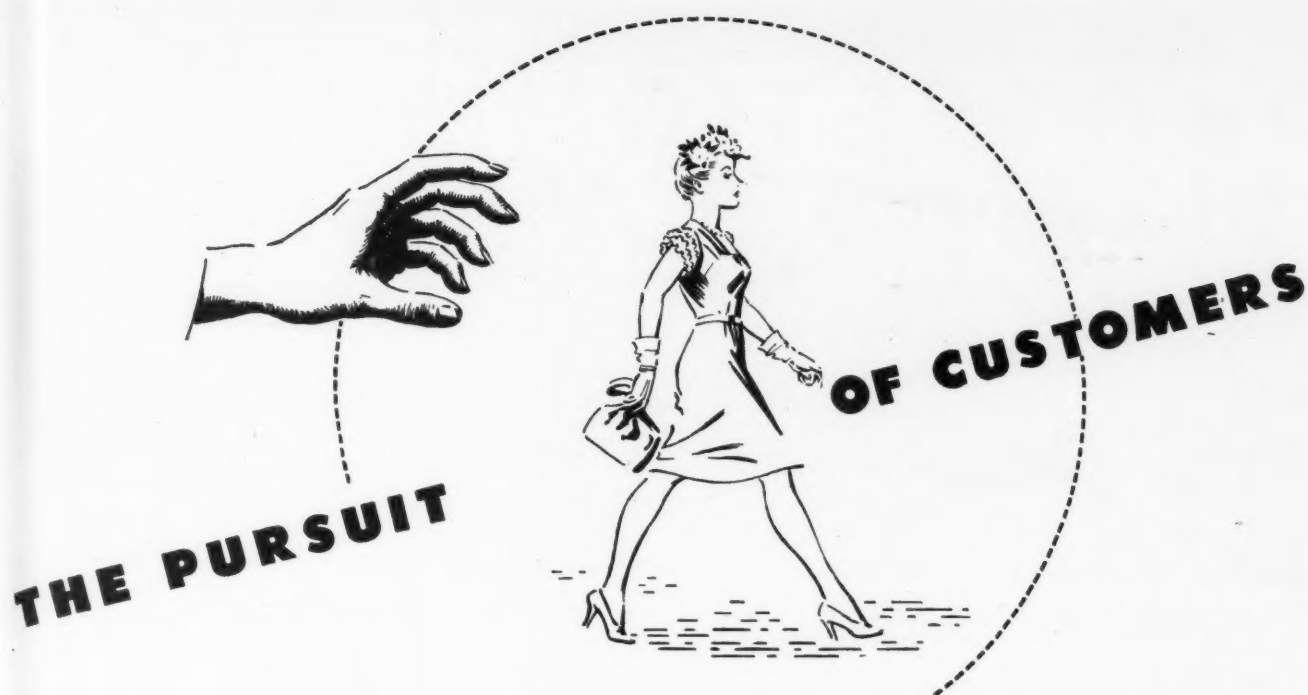
Name .....

Company .....

Street .....

City and State .....



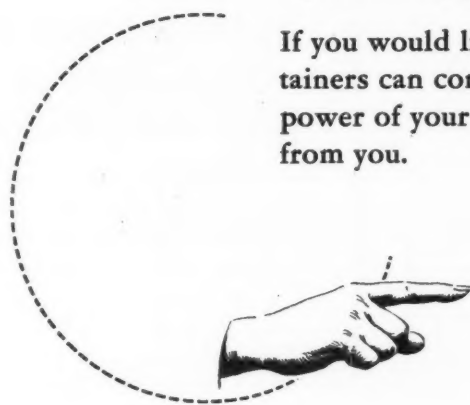


After the war, when the accent shifts from production for destruction to production for distribution, the pursuit of customers will begin in earnest.

Every type of sales aid that American merchandising genius can devise will be employed to win the interest and loosen the purse strings of the public.

In the forefront of such aids will be glass containers . . . the adaptability, durability and show-window advantages of which make them a particularly potent factor in mass marketing.

If you would like to learn how Carr-Lowrey containers can contribute to the customer-catching power of your products, we shall appreciate hearing from you.



**CARR-LOWREY  
GLASS CO.**

# PROTECTION—BY

PRINTING  
DIRECTLY  
ON GLASS



**NO LOST LABELS  
NO MISTAKES  
NO COUNTERFEITING**

Your label is as permanent as the container when it is printed directly on the glass by our ceramic printing process.

It can't soak off . . .  
It can't scratch off . . .  
It can't be imitated or altered . . .

It's **THERE** to **STAY** . . . *clearly legible!* Ceramic printing is applied directly on vials, ampules, jars and serum bottles. This modern direct printing protects the integrity of precious drugs and pharmaceuticals . . . safeguards the reputation of popular cosmetic products. Printing is applied to bottles supplied to us.

**Heidt GLASS WORKS**  
INCORPORATED

1609-15 DeKalb Avenue, Brooklyn 27, N. Y.



## To Manufacturers of Pharmaceuticals, Drugs and Cosmetics

This printing is **STERILE PROOF** and **ACID-RESISTING!** And **PERMANENT!** Not even a knife blade can scratch our clean, legible ceramic printing on glass containers. *Printing can be applied in any color on bottles of any size.*

Heidt Ceramic Printing is the highly specialized and perfected development of our 79 years as workers in glass. Our facilities for fast, reliable, large-scale production, include equipment of exclusive design.

WE ALSO PRINT ON PLASTICS

## Action



SIGNAL CORPS PHOTO

Blood plasma could not be used effectively without containers to carry it to the battle-front and without the small glass tubes which protect the needles during transit, and the tubes which serve for filtering and observation during administration.

Kimble Glass Company is proud of its service in meeting demands for both containers and glass fittings for blood plasma units.



**KIMBLE** *Glass* **CONTAINERS**

*For Assurance*

• • • *The Visible Guarantee of Invisible Quality* • • •



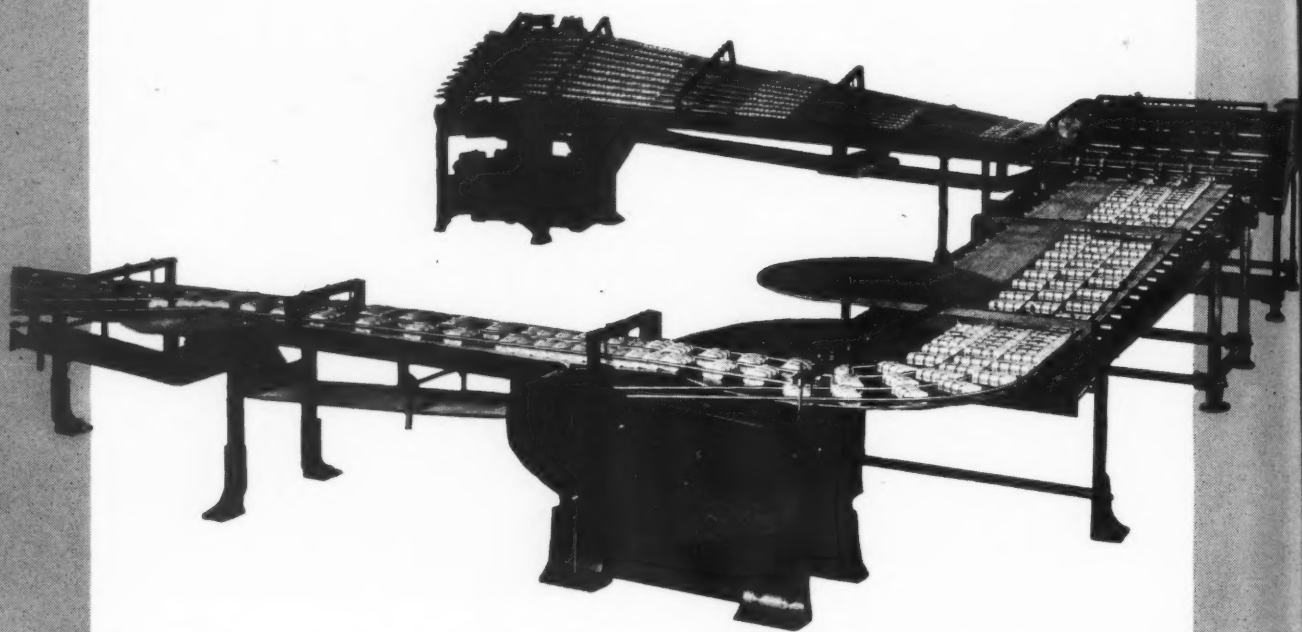
# 1 MACHINE = 18 HANDS...

... This specially designed machine collects cakes of soap at seven wrapping stations, conveys them to the packer shown in the illustration. This packer puts 900 cakes of soap per minute into shipping cartons.

The work done by this machine equals the hand labor of anywhere from 6 to 9 operators—as many as 18 human hands. The machine requires one operator.

We are not trying to sell this machine. It is running in the plant of one of the largest soap manufacturers. It was built exclusively for him, specifically to meet his packaging problem.

This is the production service which Standard-Knapp offers to all the packaging industries. We specialize in packing and sealing equipment. We study individual problems, build machines to meet them. This service can furnish a reliable basis for your postwar packaging operations, or we will be glad to cooperate with your plans now.



## STANDARD-KNAPP CORP.

MANUFACTURERS OF CASE SEALING, CASE PACKAGING, AND CAN LABELING MACHINES  
FACTORY and GENERAL OFFICES—PORTLAND, CONNECTICUT

570 Lexington Avenue 221 North LaSalle St. 145 Public Square 300 Seventh Street  
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on **CELLOPHANE, ACETATE**  
and **FOIL PAPERS**...rolls and sheets

of WRAPS for BREAD, CAKE, CANDY, SPAGHETTI, BACON,  
MACARONI, FISH, CIGARS and other packaged products

Facilities of our design department  
available for your present packag-  
ing problems—and for postwar  
planning. No obligation. Inquire.

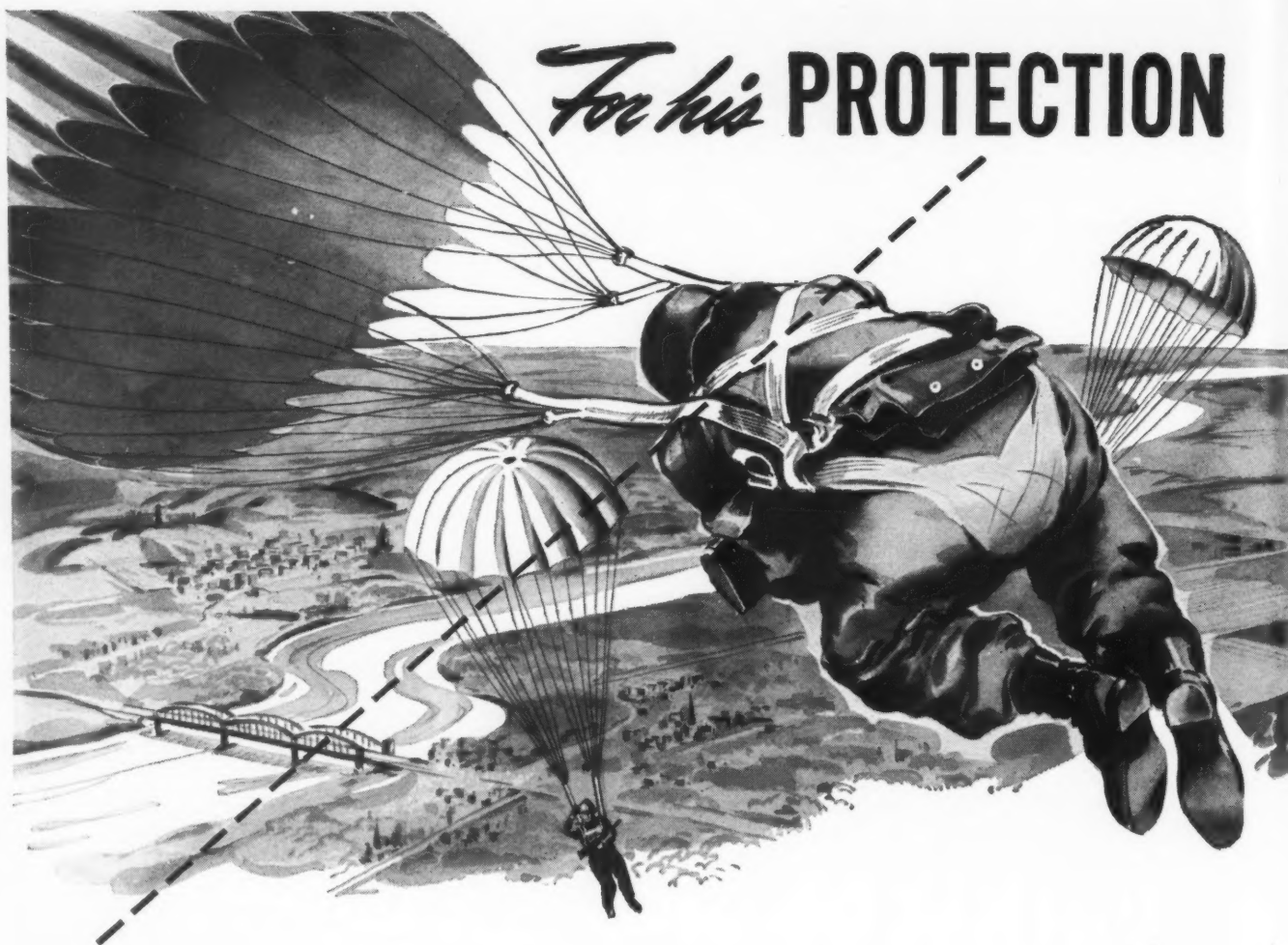
## ROTO-LITH Ltd

15 West 18th St., New York 11, N. Y.



Converters of

Trade Mark Registered  
Sylvania Industrial Corp.



# MYSTIK *Self-Stik* WATERPROOF CLOTH TAPE GUARDS HIS ALL-IMPORTANT SUPPLIES

The Paratrooper may be cut off from his base for days, so he carries his own food, weapons, ammunition and medicine. Because they mean the difference between life and death, these vital supplies are protected against dampness, corrosion and germs by Mystik Self-Stik Waterproof Cloth Tape. Every day on every battlefront, guns, planes, tanks, food, medicine and many other important war materials are arriving "factory fresh" because they are sealed against damaging elements with Mystik.

Mystik is a perfect self-stick adhesive for pro-

TECTIVE packaging, wrapping small parts, shielding, masking, holding parts in the production line and hundreds of other uses. If you have a problem that Mystik might solve, write us complete details and we will submit engineers' recommendations.

*Mystik Self-Stik Cloth Tape is the result of nine years of development of pressure sensitive adhesive products, originating with the famous Mystik Oil Change Sticker widely used by major oil companies and automotive manufacturers.*

## MYSTIK ADHESIVE PRODUCTS

A division of

**CHICAGO SHOW PRINTING COMPANY**  
2637 North Kildare Ave. Chicago 39, Illinois







# Good Hands

When your paper problem  
is in the hands of

*Williams*

it is really *good hands*. We are the  
central source of supply for the widest  
variety of box covering papers. Let us  
work with you on your next package.

**CHARLES W. WILLIAMS & CO., Inc.**

AUTHORITIES ON BOX COVERING PAPERS

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NEW YORK 12, N. Y.

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BOSTON 10, MASS.

*Now in work*

## 1945 PLASTICS CATALOG

The tremendous editorial task of gathering material for the 1945 PLASTICS CATALOG has been under way for several months.

Editors have been visiting, writing and telegraphing every factor in the far-flung plastics industry. Technical experts have been contacted. New material has been flowing in, in a steadily rising stream.

Like its famed predecessors, the 1945 PLASTICS CATALOG will contain basic, reliable, authoritative information on all plastics—molding materials, laminates, coatings, synthetic rubbers, synthetic fibers, cast sheets, rods and tubes; on all methods of manufacture— injection, compression and transfer molding, extruding, casting, laminating and finishing. It will contain at least eight exclusive properties charts of plastics, plasticizers, solvents, synthetic rubbers and others. It will contain the latest complete directory to plastics manufacturers and to their suppliers.

To this firm foundation will be added the glittering super-structure of plastics achievements during the past year. Photographs, drawings and text will bring plastics progress up to date giving planners the full facts as of 1945.

The Plastics Catalog is so consistently useful that the demand is always greater than the supply. All industry depends on it as a guide book. Leading colleges and universities use it as a textbook—and so, each year the Plastics Catalog sells out in a few months.

*There are no more copies of the 1944 Catalog available, but you may place your order now for the 1945 edition.*

**\$6.00 per copy    \$7.00 per copy (in Canada and foreign countries)**

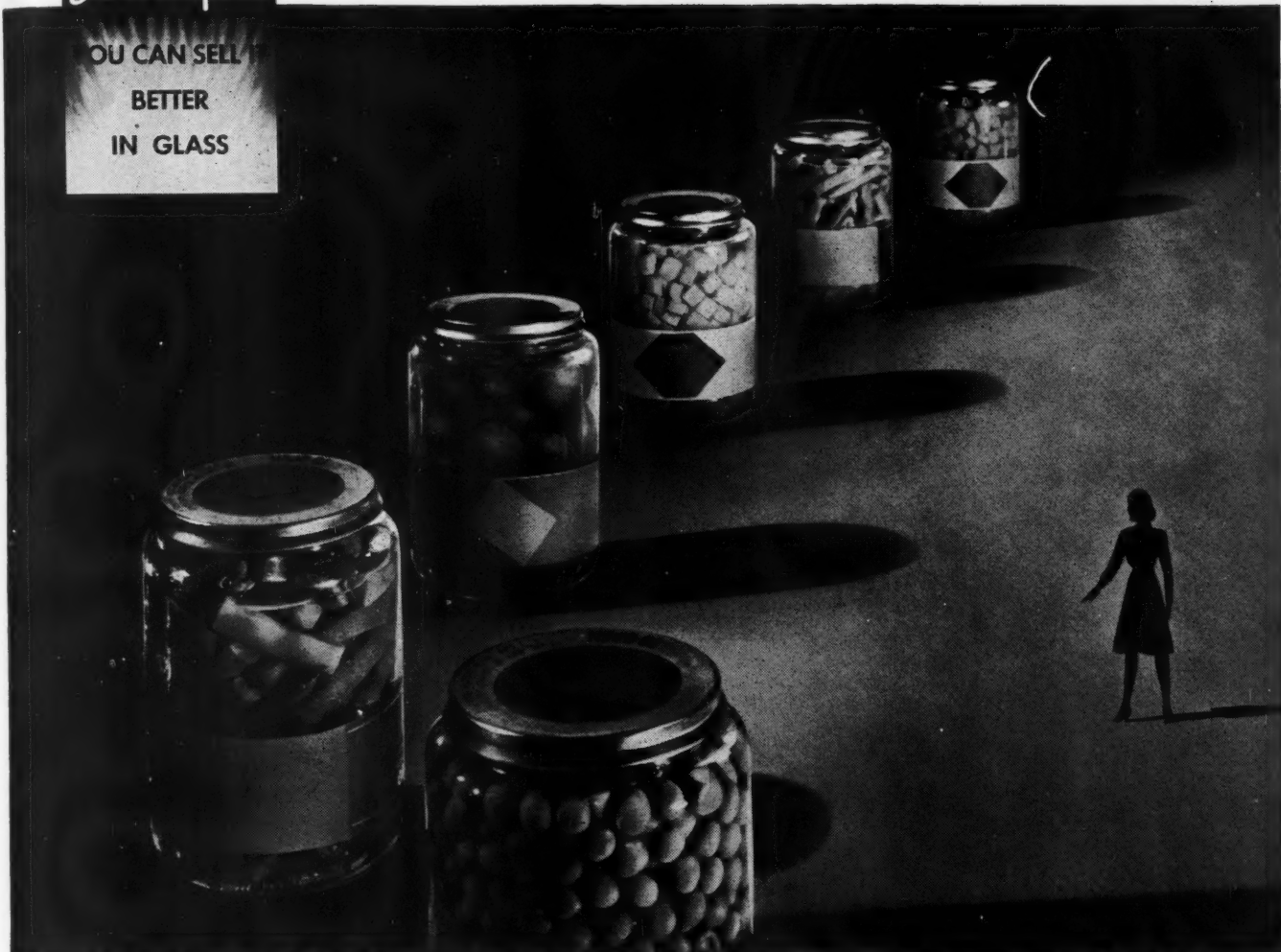
# PLASTICS CATALOGUE CORP.

122 E. 42nd Street

New York 17, N. Y.

# Duraglas

YOU CAN SELL IT  
BETTER  
IN GLASS



## It's a whole lot later than some people realize

● Just step into a store today and look at the fine products on display.

Products in glass are here, there and everywhere—more and more of them every time you go back.

Adding eye-appeal to brand acceptance at a competitive price makes a sales team that is hard to beat.

War has only speeded up the swing to glass. And what is being learned now about the sales appeal of fine products in glass containers is going to be a powerful sales weapon in peacetime competition.

Eye-appeal added to brand-appeal is establishing famous brands more firmly in housewives minds. When ration points are lifted, they'll be buying more things they want . . . they've seen them so often so clearly . . .

Don't let competition get too far ahead in selling by sight. They won't slow down when peace comes. As one of the leading makers of glass containers in the world, we are interested in glass being used where glass serves best . . . where eye-appeal is buy-appeal. If you wish to master future markets, use the help of master salesmen, Duraglas containers.

**OWENS-ILLINOIS GLASS COMPANY**  
TOLEDO, OHIO



1. America's most completely equipped container research laboratories—located at Toledo, Ohio and San Francisco, California.

2. The "know how" resulting from more products going to market in Duraglas containers than in any other brand of glass.

3. Twenty strategically located plants with the most modern production facilities.

4. Duraglas Customer Service from the production line to the consumer's mind. Quality Control . . . Packaging Research . . . Merchandising and Sales Promotion . . . National Advertising in leading magazines and over the air.

# Duraglas

CUSTOMER SERVICE

*All designed to help you sell your products in Duraglas containers.*



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**T**HIS is probably the most forthright advertisement ever published by a conservative financial House. And advisedly so.

The tempo of the day and the temper of industry's needs, under the lash of war, call for unvarnished words and shirt-sleeve facts.

Accordingly, we say that you can have our check for \$500,000\*...*more*, if you need more...less, if less is called for; on a basis that will *solve* rather than *involve* your problems. And you can have it in an incredibly short time—if there is a reasonable relationship between your worth and the amount of money required. And provided we can help you make money with reasonable safety to ourselves.

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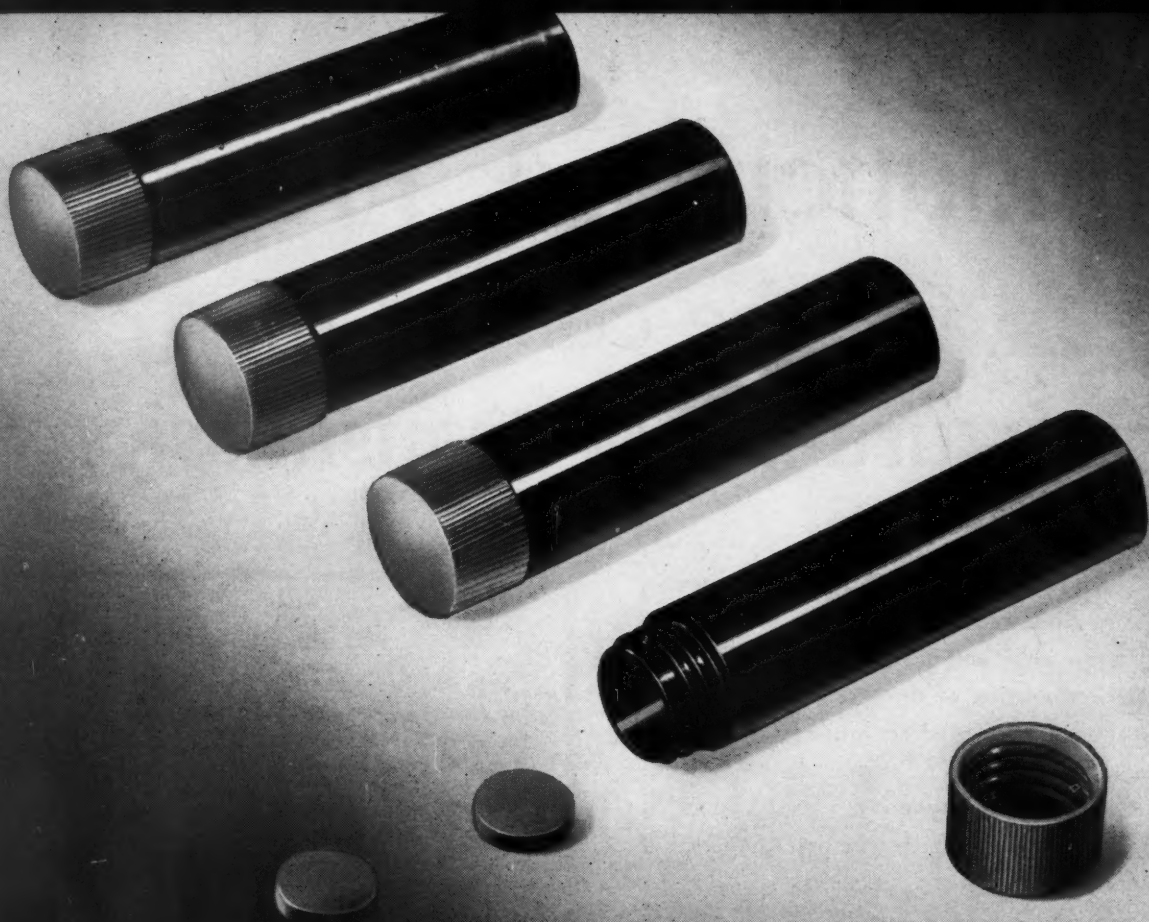
\*In 1943 our volume exceeded \$200,000,000

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*Colorful plastic pill vials and closures molded by the Wheeling Stamping Company*

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These handy, purse or pocket-size plastic containers with caps of colorful BEETLE\* can give many a product new sales appeal. For BEETLE packages have eye-catching color—the attractive “feel” of smooth texture and light weight.

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BEETLE's range of attractive, permanent colors offers wide opportunity for design and to establish *your* product's identity. Consult your molder *now* on profitable and economical packaging with BEETLE, the plastic that's *all color in all colors*.

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PLASTICS DIVISION



34 ROCKEFELLER PLAZA • NEW YORK 20, N. Y.

\*Reg. U. S. Pat. Off.

# **Beetle** - *a cyanamid plastic*

# Announcing 4 Products for the control of moisture-vapor transmission

Darex Thermoplastic Coating Materials give tough, continuous, moisture-resistant films for the safe packaging of hygroscopic and moisture-sensitive products. Since the introduction of the first Darex coating in 1937, they have been used on millions of packages with an enviable record of success. In response to wartime demands, they have come to the rescue in solving many urgent problems in packaging critical war materials.

Darex Thermoplastic Coatings are not to be confused with ordinary waxes. They are made from selected blends of wax which have been reacted with complex non-waxy materials to yield homogeneous, tough, film-forming products. They are stable throughout the operating range of their use and do not separate, stratify, or throw out in the melting tanks. They vary from hard, non-blocking films to soft, permanently plastic adhesives, all of which are sealable under heat and pressure.

Right now, restricted amounts are available for a few additional customers. After the present emergency, Darex Thermoplastic Coatings will be available in unlimited quantities.

We don't claim that these products are a cure-all. Competent box-making and sealing are also necessary. However, in view of the success we have had in solving critical problems, isn't it worth your while to talk over your plans with one of our engineers?



**DEWEY AND ALMY CHEMICAL COMPANY**

Cambridge, Massachusetts

Chicago

Oakland

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## DAREX THERMOPLASTIC COATINGS

### P-15 Group

**Uses:** Outside dipping of finished cartons, either single or double dip.

Inside-outside dipping of cartons (DACCA process) before packing.

Can be used to coat any package from 10 cu. in. to 850 cu. in.

**Properties:** Viscosity range 20-50 cps. @ 175°F.

Flow point 135°-145°F.

Suitable for extremes of 140°F. to -20°F.

Give hard, transparent, smooth, continuous film.

Moisture-vapor transmission through correctly sealed and constructed cartons, less than 0.10 gm./100 sq. in. in 24 hrs. @ 100°F. 90% R.H., as measured by anhydrous CaCl<sub>2</sub> pack.

Average covering approximately 11-20 gm./sq. ft. of surface.

### AM, BM, CM Group

**Uses:** Coating collapsible tubes.

For inside coating of fiber containers for hot packs, jellies, and jams, up to 170°F.

**Properties:** Viscosity range 23-33 cps. @ 230°F.

Flow point 155°-175°F.

Resistant to pH of 3.5 to 12.

Have great flexibility, strength, adhesion to metal.

### I58-P Group

**Uses:** Heat-sealable coatings for special papers, glassines, cellophane.

**Properties:** Viscosity high, suitable for coating work.

Flow point 150°-160°F.

Flexibility and adhesiveness over wide range of temperatures. Translucent coating.

Moisture-vapor transmission less than 0.10 gm./100 sq. in. in 24 hrs. @ 100°F. 90% R. H.

### 60-P Group

**Uses:** High-viscosity laminating adhesives for glassines, cellophane, special papers.

**Properties:** Viscosity extremely high.

Give transparent, permanently soft plastic film, with high tensile strength and permanent tack. Due to high viscosity, will not delaminate under heat. Spread approximately 5-20 lb./ream (24 x 36—500).

# DAREX THERMOPLASTIC COATINGS





**W**INNING the war of production and precision, the Raytheon Manufacturing Company's many manufacturing plants are among the users of Mason boxes which are sending out the means of Victory to far flung battlegrounds of the world.

*but this box is no secret*

Even with the Contents — "Censored", Destination — "Unknown", hundreds of manufacturers know the superiority of the Mason MAIL-MASTER. Used for vital shipping, safe packaging and assembly line part work, these boxes play their part in reaching the goal.

*The* **MASON BOX COMPANY**

ATTLEBORO FALLS, MASS. — 175 5TH. AVE., NEW YORK

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**NASHUA GUMMED AND COATED PAPER COMPANY, NASHUA, N.H.**

\* SPECIALISTS IN  
MODERN PACKAGING  
MATERIALS



# MODERN PACKAGING

VOLUME 17

AUGUST 1944

NUMBER 12

## Pre-packaging of perishable foods

*Another step forward in the evolution of grocery merchandising*

by W. J. Stelpflug\*

Unquestionably one of the biggest packaging developments to look for in the immediate postwar period is a tremendous swing toward pre-packaging of meats, produce and dairy products for retail sale, carrying to a logical conclusion a trend that started years ago when the cracker barrel disappeared from the general store.

I refer to the pre-packaging of food products in consumer sizes, ready for pick-up and purchase by the customer without further cutting, weighing or packaging. Whether such packaging is done by the grower, by the wholesaler, by the commission merchant, in a central packaging plant, or in the back room of an individual store, it is all pre-packaging.

Even in the present dire shortage of packaging materials, the demand for pre-packaged items is such that packaged vegetables and dairy products are much in evidence today,

\* Executive vice-president, Hussman-Ligonier Co., St. Louis, Mo.

particularly in the super-markets. Pre-packaged fresh meat cuts are being dispensed in self-service units by a few stores which were foresighted enough to have started the practice before the war. Meanwhile, it is safe to say that there is no alert food-store organization in the country that does not have further pre-packaging plans ready to go into operation the moment restrictions on materials and shipments are lifted.

I do not propose to discuss in any detail here the many new packaging materials and methods which will be employed in these operations, but, as the groundwork for further consideration of the practice, I would like to trace the development of the pre-packaging trend and the impelling reasons for its expansion.

The basic motivating force is the ever-pressing need for meeting competition through better control of costs.

Certainly one of the biggest problems in running any busi-

1—Long memories will go back to the day of the general store when almost every item was weighed out in bulk. Consumer-size pre-packaging was virtually unknown. 2—Compare scene in Fig. 1 with this modern market in which even perishable foods, fresh and frozen, are pre-packaged and dispensed from self-service cabinets



ILLUSTRATION FROM BETTMAN ARCHIVES





ness is the matter of controlling variable costs. There is, perhaps, no type of merchandising establishment in which this problem is more important than in the food store. No clerk can package or weigh bulk foods while serving a customer and, at the same time, be accurate. No two clerks will use the same length of time in cutting, packaging, weighing and serving a customer with bulk foods.

It is impossible, while serving customers, to be careful in the use of paper, string, etc. It is impossible to handle meats and cut to the best advantage with the customer waiting and watching. It is impossible to handle meats as they are customarily handled today and, at the same time, make the best use of scraps, or in other ways prevent unnecessary loss.

The only practical way in which foods can be handled at the lowest cost and with the least waste and with a controlled cost is through the medium of a pre-packaging operation that can be set up and operated as scientifically as is the most efficient of manufacturing operations.

When I was thirteen years old, I took my first job as a clerk in a general store in a small country town in Iowa. We had a row of shelves with bins underneath for many of the bulk foods; in front of the shelves was a continuous counter, and underneath this counter were barrels and boxes with more bulk foods. At the far end and in the rear of this store was a row of barrels set up on boxes, containing pickles, sauerkraut, vinegar and molasses.

On top of the counters were arranged rows of dried fruit boxes, and a small assortment of cheese covered over with cheese cloth. In front of the counter were other boxes containing a very limited assortment of vegetables, fruits and additional dried bulk foods. I do not know what percentage of our sale of foods was made up of canned goods and what percentage was made up of bulk foods which we had to package at the time of sale, but I would guess that the bulks made up the greater percentage.

In addition to some of the items already mentioned, there were to be found in the various bins, boxes and barrels: spices

of all kinds; sugar of three varieties (cane, dark brown and light brown); beans; rice; coffee (both green and roasted) and several varieties of tea. Among the dried fruits were prunes, peaches, apricots and raisins. About the only vegetables handled were potatoes, with occasionally a few green vegetables in season. The seasonal fruits were pretty much confined to apples, oranges, bananas, peaches, pears and grapes.

This was before the expansion of the meat market into the grocery store and, therefore, there were no meats handled except bacon slabs, along with lard in bulk. I can recall but three varieties of cheese, namely: American, brick and limburger. Butter was usually brought in by the farmer, and on its arrival the clerk who received it smelled it and decided its quality by his sense of smell—after which he called up some of the town customers to tell them that Mrs. Murphy had brought in four pounds of butter and would they like some. The butter that was unfit to be sold was dumped into a barrel and kept there as long as it was possible to remain in the store with the odor, after which it was covered up and sent to a renovating plant along with the flies that became mixed in with it in the meantime.

Eggs were purchased without being candled in the hope that they would turn out all right. There was no milk handled in the stores in those days, but it was generally delivered to the homes in cans and, at the time of delivery, was dipped out of the container and poured into a pitcher or other utensil, while the delivery can was then carried away.

In those days there was a little neighborhood bake shop, while the grocery store carried nothing except cookies and crackers, and those were always in bulk and weighed out as requested by the customer, provided it was not too inconvenient to disturb the cat which might have been sleeping in one box or another at the time.

In 1929 I started calling on retail stores as a salesman, and found that the bulk items of my first store had been greatly expanded in number by the addition of such items as grits, hominy, macaroni, spaghetti and cornmeal. The variety

3—Pre-cleaned, cellophane-wrapped produce in refrigerated cabinet will stay fresh for days.



4—No bottleneck at the meat counter. From open, refrigerated case, the shopper selects the pre-packaged meat cut she wants at price she wants to pay—and moves along.



of fruits and vegetables had likewise been expanded. The bacon and lard items had, in some instances, been added to by the addition of lunch meats, and there was an occasional grocery store that had added fresh meats. Butter was still handled largely from tubs, but some packaged butter was being sold. The small retail bakery still existed, but unwrapped bread was being handled in many stores and some few unwrapped cakes. Rolls and cookies were being handled along with the bread.

One by one, the items that I have mentioned began to appear in packages of one type or another, so that today we find the modern grocery store with practically everything except meats, produce, delicatessen products, and a few items of natural cheese coming to the store pre-packaged from a central plant.

It is interesting to think back on some of the steps that have taken place in the evolution of the pre-packaging of merchandise. One of the first steps in eliminating the waste of space, the loss of time, the giving of overweight, the lack of proper display—and certainly an improvement in the sanitary condition in the handling of most of the dry bulk foods—was the so-called bin counter. Show cases were installed for protection of bakery goods. Storage refrigerators were first used for the protection of meats, and later display cases were added to permit pre-cutting of meats to speed up service and to increase sales through display. Vegetable racks of one type and another were installed. In each of these steps it is to be noted that the result was a departmentalizing of products.

We may well ask what fundamental factors brought about the changes in the methods of handling foods. Why were more and more foods pre-packaged at central processing plants? It is a little difficult to evaluate the various influences and to place them in their order of importance. I am merely going to list the factors without attempting to say which has been most important and which was first to have a bearing on the development. The factors, as I see them, were:

- (1) Sanitation
- (2) Control of quality
- (3) Elimination of waste
- (4) Better control of profit
- (5) Control of inventory
- (6) Need for dating of merchandise
- (7) Faster service to the customer
- (8) Lower cost to the consumer through the use of pro-

duction methods of packaging, plus distribution through self-service

- (9) Branding of merchandise
- (10) Increased sales appeal
- (11) Enhanced merchandising possibilities

War has accelerated the demand for frozen foods, but many items of fruits and vegetables, along with lunch meats, cannot be frozen, and then, too, we must consider that some of the frozen items do not have the sales appeal that is to be found in fresh merchandise. Frozen foods offer some problems in so far as attractive packaging is concerned, and there is also a handicap from a merchandising angle. There is little doubt that the matter of making a package of frozen foods attractive will be solved, and it is also true that an improvement will be made in the display factor of frozen food refrigerator cases, but even so, there will remain for a long time to come a very great demand for pre-packaged items of fresh merchandise. Because frozen food merchandising is a major subject in itself, I will confine this discussion to fresh perishable foods.

For many years, we have had pre-packaged meats. Weiners have been packaged in consumer-size cartons. Bacon and hams have been pre-packaged. During the past five years, some retail stores have been pre-packaging all types of meat outside of the retail sales room.<sup>1</sup> These stores have found it practical to have meat cutters work in a back room and to have girls pre-package the cuts with proper labels and price tags to permit of the sale of meats through self-service refrigerators. Many of these stores have continued with a service department along with a self-service department, but some have operated almost exclusively on a self-service basis, with service on only rare occasions for special cuts. Generally speaking, these operations have been successful, for they have resulted in lower overhead and in increased sales.

It is true that red meats have offered some serious problems from the standpoint of pre-packaging because of inability to control bleeding and because of discoloration of the meats as they come into contact with the types of transparent films now available for wrapping. Experiments have been carried on continually for solving the problems of pre-packaging of red meats, and there is little doubt that these problems will be licked.

In the meantime, there are few problems in so far as pre-packaging of lunch meats is concerned. The retail sales of

<sup>1</sup>"Self-Service Meats," MODERN PACKAGING, February 1943, p. 48.





5—This store features a special help-yourself cheese department, with even non-processed cheeses cut, pre-packaged, ticketed and preserved by means of refrigeration.

pre-packaged lunch meats have increased because of the greater merchandising opportunities, as has been true in all other similar experiences. I know of stores that have had as much as a 300% increase in the sale of lunch meats which had been pre-packaged and which had been placed in a special self-service counter where every opportunity was used for locating that department at the most advantageous spot and for using every modern merchandising means for placing special emphasis on a departmentalized lunch meat section.

From the standpoint of operating overhead, I have seen figures to prove a reduction in cost with a pre-packaging and self-service operation of as much as 6% as against the old conventional service type of operation. I do not say that these figures can be maintained with a general application, for I know that an isolated case does not necessarily prove a point. I am sure, however, that there is a considerable economy as well as a greater opportunity for profit in a meat department handling pre-packaged items than in one of the conventional type.

In so far as dairy products are concerned, there are not many problems in pre-packaging. Practically all processed cheese is already pre-packaged in consumer size before it reaches the retail store. Milk has long been bottled in central plants. Cottage cheese is today being successfully pre-packaged in consumer size quantities. Many of the eggs sold today are pre-packaged. About the only item that still remains to be pre-packaged is natural cheese, which has presented some difficulty. Natural cheese is usually of a round shape of necessity because it must age from the center out, and a square cheese will not age properly. Because natural cheese is round, it is not easy to cut it into shapes which lend themselves readily to neat packaging. Another one of the problems in packaging of natural cheese has been the inability to control mold. It may be said today that manufacturers of cheese of this type are developing such cheese in shapes to lend themselves to proper cutting and packaging. Chemical means have been found for solving the problem of aging a square cheese. Means have also been found for the control of mold in natural cheese, and therefore, manufacturers today are experimenting with natural cheese which can be cut and packaged by machinery and delivered to the retail store in consumer size, to be handled in exactly

the same manner as are all other pre-packaged items today.

Dairy products offer tremendous possibilities for increased volume in a store. The American consumers have not been educated to eat the amount of cheese per capita that is consumed in other nations. Some stores have experimented with dairy departments in which all items have been pre-packaged and sold through self-service refrigerator cases, with the same emphasis on the merchandising angles as has been placed on other pre-packaged items. I know of one group of stores that have proved that they can get a 200% over-all increase in dairy products volume by complete pre-packaging and proper self-service departmentalizing. In such an operation, they are able to take advantage of national advertising, such as Borden's build-up on Wej-Cut cream cheese. With a complete pre-packaging operation, there is the opportunity to locate the dairy department where it offers most advantages from the standpoint of profit, traffic and related sections of merchandise, as well as from its sales possibilities.

The produce field is just beginning to make real progress. The produce department has always been one of the messiest in the store. It has been almost impossible to control or predetermine profit in a produce department. Complete pre-packaging of fruits and vegetables before these items reach the retail store can eliminate all the mess and will make it possible to predetermine profit.

Complete pre-packaging of produce is practical. Some items will be completely wrapped while other items will be bunched and banded or bagged. Berries have always been packaged by the grower in consumer size quantities. For some time, some commission merchants have been packaging tomatoes, spinach, head lettuce, bean sprouts and other miscellaneous items.

Today, I know of one store that is pre-packaging practically all items, including carrots, beets, turnips, parsnips, brussels sprouts, broccoli, cauliflower, green beans, fresh peas, spinach, asparagus, tomatoes, radishes, celery, peppers, green onions, head lettuce, leaf lettuce, rhubarb, lemons, oranges and potatoes. These items are being pre-packaged in a central warehouse with the use of a packaging machine very similar to that which is used for wrapping bread and cakes. The pre-packaged merchandise is moved to the retail store and is sold from self-service refrigerators. I have a report on this



operation and the following excerpts have been taken from it:

"As yet it is too early to determine results, but many favorable comments by customers were heard at the store, such as 'I can serve myself'—'It's so nice and clean'—'I could wear my white gloves when I buy vegetables this way'—and others of that type.

"There was no noticeable crowding of customers in the produce department. In fact, it seemed as if the department was not busy, but the fact is that the department had a sales increase on both Friday and Saturday, while the increase for the entire week was considerable. This sales increase is contrary to produce sales in the city, which have been down.

"The neatness and cleanliness of the produce department is very noticeable; no leaves, pieces of vegetables or water, so commonly seen in produce departments, regardless of how much emphasis is put on keeping the floor clean.

"The most important point from a sales view is that you can have a completely set-up department at all times—at opening time and at closing time. It is possible to carry a three-day stock on every item, for the products hold up much longer than in the ordinary method of handling. This fact also allows the housewife to buy larger quantities, for they will keep longer for her as well as for the merchant.

"As to damaged goods, we feel that when in operation a longer time we will be able to reduce this loss to a 1% rate compared to the present rate of 5%. There is no need to reduce the retail price to clean up items, as these are as good on the fourth, fifth or sixth day as when packaged, and with a three- or four-day salability limit, with proper rotation and ordering of all items, everything should be sold before the salability time expires.

"Cost of hauling trim as a garbage away from the stores can be greatly reduced. Quality of merchandise bought can be better controlled. Clerk hire can be reduced in store due to less handling and trimming. This type of handling assures us that our customers will get full value, full weight, and quality fruits and vegetables at all times."

It might also be said that in the project just mentioned, the vitamin and food values were tested by the laboratories of a state university to determine comparative values from the same lots of merchandise between pre-packaged and properly refrigerated items and items handled in the conventional manner—open and non-refrigerated. The tests have been most favorable to the pre-packaged, refrigerated items.

Delicatessen items which have usually been handled in bulk and dished out as purchased by the customer can also be pre-packaged. I know of several retail stores where this pre-packaging of delicatessen foods is being done in the kitchen on a production-line basis. The packages resulting are more attractive and lend themselves to better merchandising. The foods stand up better. The sales increase and the over-all profit is increased.

One cannot ignore the fact that the economic factors which have caused the continuous trend to pre-packaged merchandise will eventually carry all foods to the same point.

You have only to consider the waste in the handling of meat under the conventional methods of today to arrive at the conclusion that a change must come. It just does not make sense to ship a beef from a farm to a Chicago packing house, where it is broken down and shipped with its bones and waste products to a retail store many hundreds of miles away—where it again is broken down at too high a cost and with too much waste, and from which point the bones and tallow are again returned to the packing plant. The cost of distribution must be lowered.

Again take produce, and you have very much the same situation. Under practices common today, carrots, beets, turnips and other items of this nature are shipped from the grower through a commission house to a retail store, and freight is paid on the tops, which are later cut off by the housewife and thrown into a garbage can. These same items might well have been cleaned and trimmed at the point of production and placed in a consumer-size package. I know of one organization which has contracted for the excess space of an airline to carry these items of produce from the point of origin in consumer-size packages to the point of retail sale. Air cargo must not be overlooked as a factor in the pre-packaging trend.

We all know that spinach, properly cleaned and packaged at the point of origin, will reach the consumer at a price much below its present cost. We know that the by-product of all food items, when properly utilized while fresh, can be converted into something of value instead of waste that adds to cost of distribution.

One of the important factors in connection with pre-packaging foods is that many of the items can be made ready for cooking. Such items as beans, peas, spinach, etc., can be completely prepared for the (Continued on page 146)

6—Pre-packaged meats in self-service cases. Note use of mirrors to bring display up to eye level. 7—Butter, cheese, milk and eggs are in well-lighted refrigerator; related items are displayed on open shelves above.



# STORAGE AND HANDLING OF PACKAGING MATERIALS



1—In two laboratories, all shipments of various packaging materials are carefully checked on their arrival for exact conformance to McCormick & Co.'s specifications.

Wartime manpower stringencies have taught even the best of packaging plants new lessons in efficiency in the storage and handling of materials. Some recent changes are of a temporary, emergency nature but many others represent permanent improvements.

A complete re-examination of this phase of operations in one of the large, up-to-the-minute plants should be instructive to all packagers, and for such a study there is no better subject than the progressive McCormick & Co., Baltimore packers of spices, extracts, teas, condiments, insecticides and drugs, who use four types of materials—paper, glass, metal and plastics—in packaging their 700-odd products.

The McCormick & Co. plant has long been a model of efficiency and during the war further advances have been made in reducing the handlings of materials from the time of arrival to delivery to the packaging line.

A 2½-acre storeroom, on the fifth floor of the 10-story plant, is devoted exclusively to the orderly storage and inventory of packaging materials, and with some exceptions all supplies are taken directly there from the freight cars, awaiting requisitions from the packaging lines.

Paper materials are represented principally by the large quantities of folding cartons used to enclose bottles of flavoring extracts and insecticides, and of course by the necessary

fibre and corrugated shipping containers. On requisition, these materials are simply stacked on skids and taken directly to the packaging machine, the skid being left there until it is emptied.

Metal containers are at present used only on the Army's new DDT insecticide and a liquid insecticide spray. These containers arrive in finished form, and they represent one of the exceptions to storage in the central packaging storeroom. The cans are stored on the floor where they are used and are loaded directly into a chute and automatically taken into the filling machines. This package-supply operation represents a two-thirds saving in manpower, as previously two men were required to bring the containers to the packaging floor and one to dump them; now one man does the entire job.

Glass, as used for mayonnaise and other condiments, also comes in directly to the packaging room, where no more than a two-day supply is maintained against an emergency. Three men are used to maintain this stock and keep it moving to the filling machines.

Plastics are used principally in the form of bottle and jar closures, of which the stockroom attempts to maintain a 30-day supply. Shipping cases each containing approximately 5,500 caps are brought to the capping machines on skids and unloaded into the hopper.





2—A running inventory is kept by a tag such as this one, attached to each lot of packaging materials.  
3—In the big, many-aisled storeroom on the fifth floor, which is devoted exclusively to packaging materials, order and convenience is the rule, thereby keeping manpower needs to the irreducible minimum.

Cellophane requires merely storage in a dry place at moderate temperatures, for which the central storeroom has been found adequate. No special precautions are taken even with the moistureproof types.

Metal foil is used in the form of heat-sealing pouches, and experience has shown that it must be stored in a dry place and at a temperature below that of the packaging room, to avoid condensation of moisture. The inventory of foil materials varies from a week to a month, but it has been found desirable to store it for at least a week.

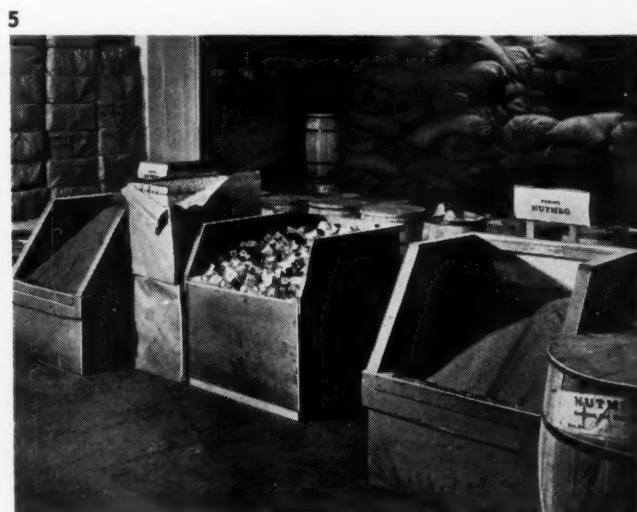
The McCormick company maintains its own printing department for imprinting boxboard. The boxboard arrives in blank, cut to size, and all of it is printed up before being placed in stock. Formerly the blank material was kept in the fifth-floor storeroom and two men were required to load it, bring it to the printing presses and unload it. Now the material is brought on skids to the printing department directly from the box cars and the extra handling is eliminated. The

printing presses work steadily, regardless of fluctuations in packaging operations, and the boxboard is printed up sometimes as much as three months ahead. Re-piled flat on skids, it is moved to the carton formers and gluers as requisitioned by the packaging department.

The fifth floor package storeroom is a study in efficiency, with materials of all types stacked high on skids in double rows with adequate aisles between. Inventory tickets are attached to each stack or box of material so that a running account may be kept as withdrawals are made. Replacement ordering then becomes a mere routine clerical job.

Not only is the number of stock handlers reduced to the minimum through efficient arrangement of stock, but every effort is made to eliminate any waste motion. In the case of shipping cartons, for example, inner partitions are stacked on the opposite side of the aisle, so that it is easy to take an equivalent number of partitions each time a supply of boxes moves into the plant. All withdrawals are noted on a sheet

4—Most carton stock comes in blank, is printed in the plant, then returned to skids to be formed up as needed. 5—Fibre cans for many dry products are stored alongside the product and fed down chutes simultaneously to filling machines. In this case, ground nutmeg is going down each side, cans down chute in center.







6

6—Small lots of folding boxes for small-order products are kept in storeroom in tin boxes on tilted rack. 7—Made up as needed, small-order cartons are moved to packaging room in big paper bags on wheeled truck. 8—This is the special small-order department where some products are weighed and packaged by hand.



7

which goes to the production department for double-checking on stock.

Paper and paperboard materials generally are stored flat and are not set up until they actually enter the packaging machine. This is true of all large-production runs. However, since the McCormick Co. follows a policy of "fresh packaging" each order, no matter how small, special provisions have to be made to handle the frequent orders for lots of a dozen or two of some relatively inactive product.

A special small-order department has been set up on the sixth floor, using hand packaging and semi-automatic methods. This department uses packages identical with those handled on the fully automatic lines—principally small folding cartons for spices and bottles for extracts—but the containers in this case must be set up before being delivered to the department.

Accordingly a special supply of these containers is kept, set up, in the stockroom, to be sent in small lots to the small-order department as requested. These cartons are, for the most part, quite small and they are stored in open tin boxes set on tilted racks in one corner of the storeroom. They are often delivered to the packagers in large paper bags.

The small-order department handles not only small lots but also certain products which for one reason or another cannot be handled on automatic lines.

The sixth floor also has two large and complete laboratories, widely separated, where all product and package materials are constantly checked against specifications. One laboratory works only on insecticides; the other checks all food products and packages.

Separate storage space is provided on the fourth floor for the war-substitute metal-end fibre cans, large quantities of which are used for spices and other dry products. Most of these products are packaged on the floor below, and the cans are stored above, along with the product. Two chutes with large funnel openings lead down to each filling machine. When a product such as paprika is to be packaged, the bins of paprika are simply emptied into one chute and the required number of cans dumped into the other chute, to be fed automatically to the machine.

On another floor this company operates a battery of the world's fastest tea-bagging machines. Despite a wartime



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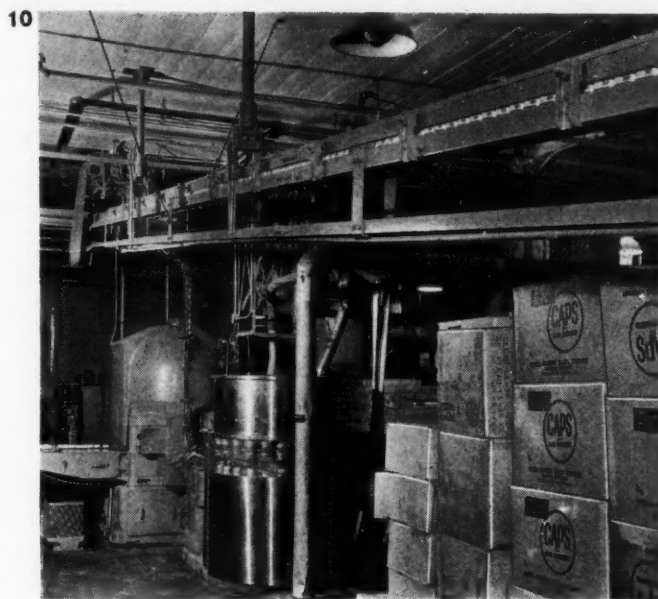
change from gauze to paper as the material for the bags, some of the newer models continue to operate at a speed of 300 bags a minute. Rolls of paper are simply brought from the store-room as needed and installed in the machine, where they are automatically slit, formed, filled, sewed and tagged as individual bags.

Glass jars for food products such as mayonnaise and mustard involve no special handling problem. As cartons of jars arrive from the glass manufacturers, the jars are loaded in trays and sent to sterilizing machines, from which they move to filling machines. The labeling operation is set up so that labeling may be done either before or after filling, depending upon the pile-up of empties at the filling machine.

An interesting sidelight on this firm's packaging operations is the fact that it has adopted the policy of breaking down single-machine operations in all cases to two or more smaller machines. The purpose is to avoid a complete shutdown of production in case of machine failure. In place of one large machine turning out 150 packages a minute, for instance, McCormick would prefer to have two smaller machines of the same type with a capacity of 72 packages a minute each. In the event of mechanical failure, only 50% of production, rather than 100%, would be lost. Throughout the plant, as rapidly as possible, single-unit installations—even though they may be large, modern machines—are being torn out and replaced with a dual setup.

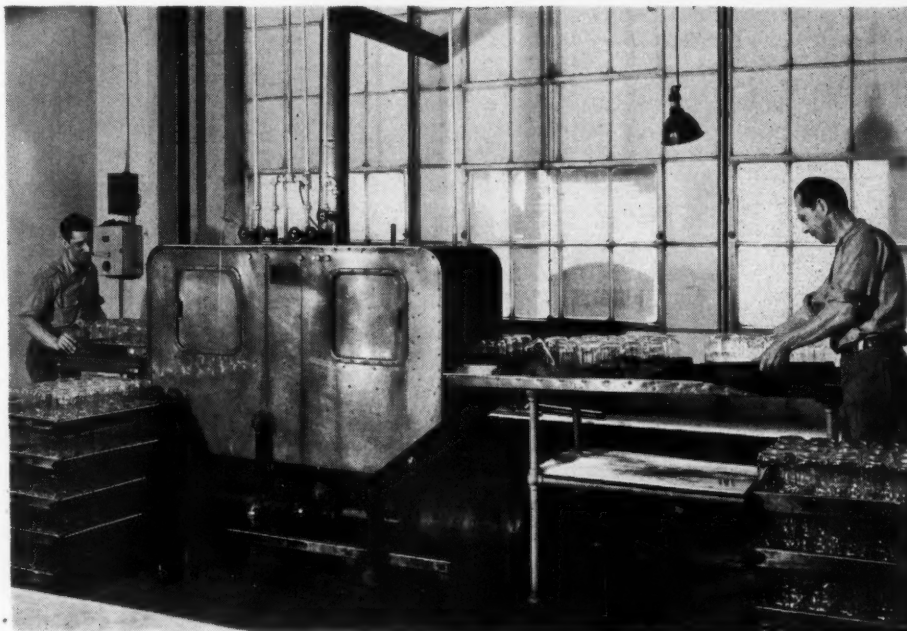
The McCormick Co. is widely known for its "Multiple Management" system, whereby committees and boards elected by the employees represent all departments in actual management. According to Charles P. McCormick, president, the efficiency of the plant is due primarily to this system, and the Factory Board was solely responsible for the changes in handling of packaging materials, which were made in order to lessen non-productive time and increase the efficient use of materials.

Because of such changes, largely initiated by the employees themselves, the company has been able not only to handle a large amount of war work but also to maintain its civilian business. McCormick credits his employees with the effort that has won the company the Army-Navy "E" with star and the War Food Administration "A."



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9—Wire holders lift eight fibre cans at a time from shipping box; 120-ft. conveyor line takes them to pepper-filling and packaging machine. 10—Cans unload into enclosed vacuum pepper-filling machine (center), then move into machine (left) which crimps on metal shaker tops, thence into shipping cartons. Long package-feeding line is necessary because of high speed of machinery. 11—Glass for mayonnaise moves into and out of sterilizer on trays which convey jars to labeler and filler.







1—Unit packaging of coffee may be future answer to an always fresh cup. Aspirin package was an outstanding wartime replacement of metal. Lower center, horoscope medal in sealed packet for pasting on birthday cards. Early unit pack was this single foil-wrapped Alka-Seltzer tablet in folder.

## Unit packaging . . . a trend for postwar

One of the most talked of postwar subjects in drug, toiletries, cosmetic, food, hardware and novelty packaging fields is unit packaging.

By unit packaging is meant those tiny one-dosage, one-application or individual-service packets—just enough for a single usage.

Interest is heightened by the better protective properties that have been developed during the war for all types of flexible packaging materials and the promise of new high-speed equipment that will bring such packaging within a price range that the makers of this equipment say will be amazing.

This progress is being watched closely by the makers of face powders, face creams, soap powders, water softeners, seasonings, concentrated coffee, dessert powder, hardware and many others for the merchandising and profit possibilities inherent in the unit package.

Such things are being planned as a tiny folder like a match book that a woman could put in her purse, containing three tiny packets—one with cleansing cream, another with skin freshener, one with face powder—or buy quickly at a counter that night she came in town for the theater and forgot her cosmetics. Think what a fine merchandising idea this will be for the maker of high-priced cosmetics to get his line widely known through small unit sales at popular prices.

The waterproof foil packets for soluble coffee—containing just enough for one cup—designed for Army ration packets may be the answer to an always fresh cup of coffee—unit packs that will stay fresh up to the moment they are emptied in a cup—different from a pound of coffee which starts to stale the minute the lid is lifted from the vacuum pack. Think how convenient this will be for small families or the lone dweller in an apartment where a pound of coffee is not used up for weeks.

Concentrated coffee, it is claimed, will stay fresh indefinitely

in a heat-sealed foil packet laminated with cellulose acetate and with an inside protective vinyl coating.

Spices and seasonings may be packaged in individual pockets on a "card" of cellophane, each pocket containing just enough seasoning for a salad, a soup or a casserole. These may be sold from convenient dispensing devices in self-service markets at popular prices. In the home, each application of seasoning will be protected until it is used, because each measured quantity will be enclosed in its separate pocket, aroma retained and not allowed to escape on the shelf.

Hardware manufacturers and makers of small machine parts, nuts and bolts, phonograph needles will find in high-speed unit package production the answer to a difficult package problem—that of providing economical sales units for hard-to-handle items. In packets of transparent materials, these tiny metal objects are kept from loss, may be clearly visible, easily identified and protected from corrosion by moistureproof packaging.

Another important field for unit packaging will be in powdered soaps, water softeners and for home-use fabric dyes.

A successful distributor of foot preparations was recently looking for a method to package powdered foot soap. He wanted small packets, each to hold enough for one application. The only way this had been done previously at a price he could afford was by hand-filling the tiny envelopes with a spoon. New automatically produced packets in the future will perform this operation in a fraction of the time of the hand operation and, it is anticipated, at an economical price.

People who travel in areas where the available water supply is hard will appreciate a few tiny unit packs of water softener that they can slip into traveling case or purse to use while en route.

Packers of bluing and home-use fabric dyes may find a



new advantage in tiny packets for such products which may be made automatically of filter paper with a string and tab as a part of the packet. The packet could then be dropped into water and taken out again by the tab and string without getting the bluing or dye on the hands.

Unit packages will also be used in many novelty lines. Just before the war, one company sealed horoscope medals in cellophane units so they might be pasted to birthday cards.

Unit packaging started years ago in the drug field and today is probably still most widely used for drugs. Physicians, to assure accurate dosages, prescribed tablets or capsules that would give the patient just the right amount of medicine at proper intervals without danger of his getting an over- or underdose. Where capsulation or tablets were not feasible, he specified to the pharmacist a certain measured quantity of medicinal powder that was put up by hand in a paper fold. This method was slow and tedious. With the growth of packaged medicines going from factory to consumer, either by prescription or over the counter, the need for quicker and more efficient methods of providing consumer units became apparent and new ways were invented to package these units automatically.

With such equipment, packaging material and product may be placed in a patented automatic machine which produces a completely sealed package unit containing one or more tablets or a measured quantity of granular or powdered material. The heat-sealed packet is produced by feeding two continuous strips of sheeting in a machine that automatically inserts the product between the strips, heat seals it into a packet or envelope, then cuts the packet apart and automatically affixes labels, if a separate label is used.

Even before the war advantages of this type of packaging were being recognized for many products other than drugs, such as individual portions of powdered chocolate for hot drinks at soda fountains and restaurants. Cosmetic houses were beginning to use these packets for samples of face powder, attached to what is called a catch folder that looks like a match book.

Merck & Co. used a cellophane packet of this type as a sampler for moth crystals. The packet, enclosed in a die-cut folder simulating a giant moth, shows the dramatic promotional effects that may be devised.

Another big field for the unit package before the war was export. In countries where incomes are small and buying

power is low, small packages are the only ones that will match the pocket book. Many types of small packets containing four or five tablets or capsules were designed for this purpose and more for other products will undoubtedly find their way to future foreign markets.

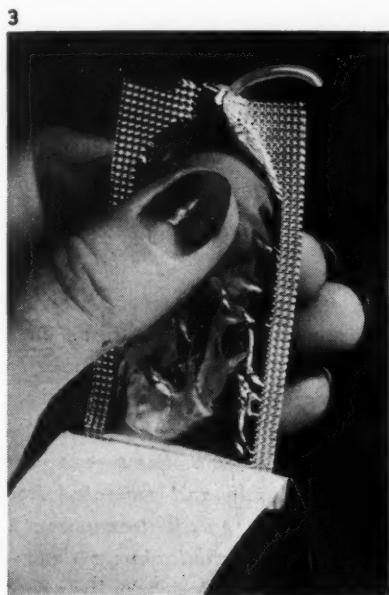
Similar flexible unit packs become important replacements for metal. The Bayer aspirin package is an excellent example of this. Some of these unit packs may continue in the post-war era.

When the war started, both Medical and Quartermaster Corps, looking for high-speed production of protective packages, adopted unit packets particularly for medicines and foods. Outstanding ones are the small soldier units of sulfa drugs and the foil packets of concentrated coffee and dehydrated soup.

Military and essential civilian uses—particularly vitamin packages—have limited the use of many packaging materials and the capacity of the equipment to handle unit packages for ordinary consumer purposes, but the knowledge gained during the war period and the plans now being made forecast a brilliant future for the flexible unit package.

As with all scientific packaging, each product and each problem for unit packaging must be studied separately. Each product has its own peculiarities which require a certain style of unit package and materials adaptable to that product.

The equipment for the packages discussed in this article is capable of making a variety of sizes from a tiny physician's sample to a large dispensing unit in practically any volume



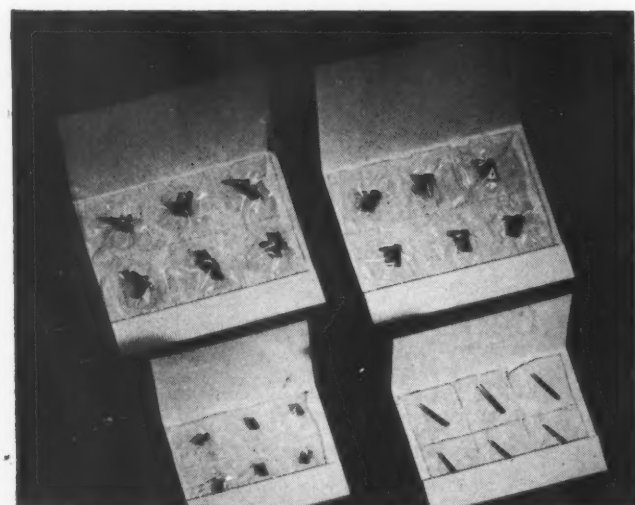
**2—Unit packs can hold liquids. A suggestion for a purse-size cosmetic folder, containing sealed packets of cleansing cream, skin freshener, face powder—enough for one application each. 3—Cream is squeezed out through opening. 4—A foil face cream packet and a pre-war face powder sample in folders.**



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from thousands to millions a day on high-speed machinery.

When the requirements for a machine are too far removed from the standard units, larger concerns may have their own machines designed to their specific needs for use in their own plants. For other requirements, most companies find it more efficient to have this type of packing done on a custom basis.

These machines will automatically unit pack any dry powder, any single item such as a tablet, capsule, small metal part—or multiples of such items. The machines will also package accurately measured quantities of creams, ointments or other semi-liquid or liquid products.

Because of the wide variety of products that may be packaged, it is apparent that many different types of flexible packaging materials may be used. In general, one may say that the machines will handle automatically any packaging film that is heat-sealable. If it is not heat-sealable, it must be made so either by coatings or laminated combinations. By means of such combinations, the packages may be made waterproof, moisture-vaporproof, greaseproof, airproof, light-proof, odorproof, siftproof and leakproof, or be given any combination of such properties.

The packages may be transparent or opaque—or may be transparent on one side and opaque on the other. All types of transparent materials may be used depending on the requirements of the product: cellophane, pliofilm—after the war Saran and other new plastic films. Moistureproof packages may be made from aluminum foil laminated inside cellulose acetate or ethylcellulose sheeting to give added strength and lustre to the outside of the package. Inside, a vinyl or other coating gives added moisture protection and keeps the product from direct contact with the metal.

Opaque materials such as foil will also be advantageous for products where visibility does not add to the sales appeal, such as creams and ointments that look messy if seen through a transparent film.

The packages may be either die-cut individually or, by only partially cutting through the stock, may be taken out of the machine as a perforated ribbon which can be easily banded or boxed in any desired quantity. This will permit unit sales or multiples of such units, which can be priced at 10 cents each, 3 for 25 cents, 12 for a dollar, depending on selling price and merchandising practice. To encourage self-service, gravity feed, hopper-type dispensing cartons may be devised.

All types of printing may be applied to the packages—letterpress, aniline or gravure by means of type set-ups, zincs, halftones, process plates, in any combination of colors. Printing of trade identification is repeated on the sheets fed into the machines so that each package is completely trade-marked. Designs should be all-over patterns, so that no matter where the design is cut it is repeated. Machines run at such high speed as these cannot register accurately on the sheet to small fractions of an inch, (Continued on page 148)

5—A sampler packet of moth crystals, in a die-cut folder shaped like a giant moth, suggests dramatic promotional effects. 6—Tiny unit packs for drugs have gained wide favor in Latin America where popular sales units are small. 7—Screws, phonograph needles, lighter flints—hard-to-handle items—are kept from loss, are easily identifiable and protected from corrosion in high-speed unit packs of transparent moistureproof materials. 8—Drug manufacturers long ago discovered the advantages of individually wrapped capsules and tablets.



# Canned fuzes

Specially designed and lined metal cans are being used by the tens of thousands in an improved method of packaging mechanical time fuzes mass-produced by the Eclipse Machine Division of Bendix Aviation Corp.

The Bendix plant pioneered nationally adopted methods for volume production of the finer-than-fine watch fuze mechanisms which are the "brains" of modern anti-aircraft and other projectiles. The fuzes are set, as an alarm clock is set, to explode a shell or projectile accurately and "on demand" after it leaves the barrel. Centrifugal force, developed as the projectile hurtles from the barrel, starts the timing mechanism ticking.

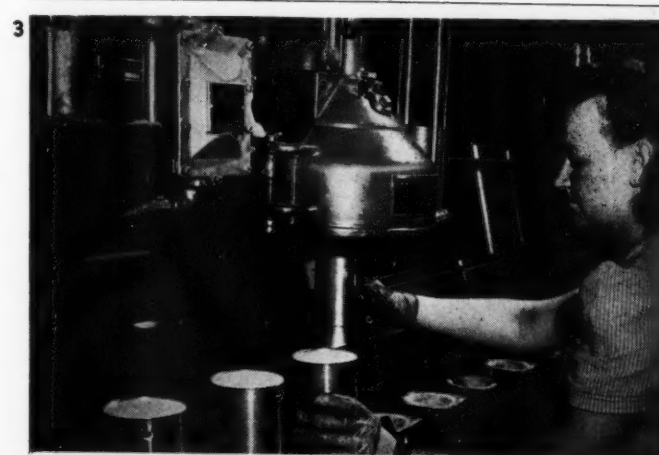
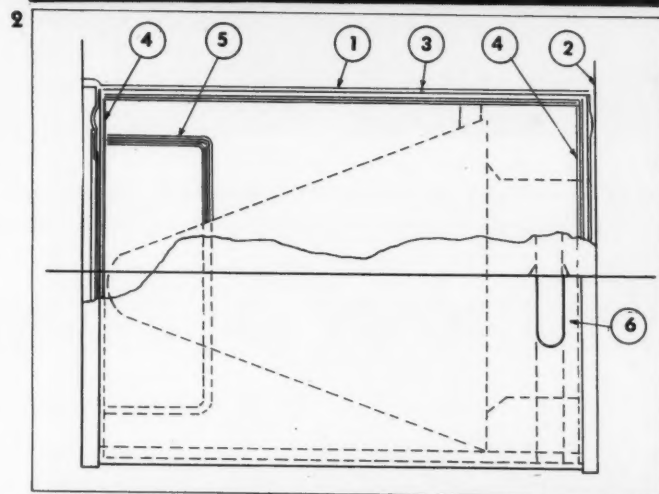
Extremely sensitive, despite their necessarily rugged construction, mechanical time fuzes formerly were packed for shipment in lots of 25 in a large terneplate container much like an oversized sardine can. With this method the lid had to be soldered on completely in place. Then the whole shipping assembly had to be tested for leaks, a procedure which required a final soldering job after the tests. The terneplate container then was placed in a wooden box.

Under former procedure there was a large tear strip on top of the terne container. As a result, when one container of 25 fuzes was opened, all 25 were exposed to the atmosphere. In adverse weather, particularly under extremely humid or damp conditions, most of the 25 fuzes often would be rendered useless by moisture before they could be used.

To solve this problem, Eclipse engineers and Army and Navy Ordnance experts specified the individual can so that it would be possible to open up to the elements only the exact number of fuzes which were to be used at any given time. Protected in the can as described, the fuze is, of course, completely waterproofed, and it can stand rough handling and severe exposure to water and humidity without deterioration.

The can, developed by engineers of one of the large can companies, is a herringbone-scored, key-opening, special coated terneplate, approximately 31-gage material, size  $3\frac{7}{16}$  by  $4\frac{11}{16}$  in. The liner is a chipboard tube approximately  $\frac{3}{64}$  in. thick and of proper dimensions to fit snugly within the can. In addition, there are chipboard discs and a bottom support which fit into either end of the can. The line sketch (Fig. 3) shows the relative positions of the various components of the completed package. The can itself is Item 1; Item 2 shows the assembly of the cover and the use of single seam seal; Item 3 indicates the chipboard liner which protects the fuze from direct contact with the can and acts somewhat as a cushion to protect it from mechanical injury; Item 4 illustrates the position of chipboard discs which are put in either end of the can in sufficient number to insure that the fuze is tightly packed; Item 5 is the bottom support, the function of which is to hold the small end of the fuze in a centralized position; Item 6 indicates the loca-

(Continued on page 146)



1—Components of the individual fuze package. 2—Cross-section of the package showing (1) the can; (2) cover with single-seam seal; (3) chipboard liner; (4) chipboard discs; (5) bottom support and (6) can-opening tab. 3—Cans are sealed on a semi-automatic machine as they pass on conveyor. 4—Wooden shipping case holds 25 of the cans.





1—Like a new model of a motor car, each of the seven new Pillsbury packages was presented to the salesmen by drawing the curtains on this miniature stage and spotlighting the designs dramatically.

## Merchandising the package change

Not so long ago, changes in package design were undertaken cautiously, almost stealthily. The classic instance is that of the soap manufacturer who made changes in the wrapper of his leading brand so gradually that ten years were consumed in accomplishing all the steps. He succeeded in doing it so carefully and so secretly that no one noticed it.

Today, however, no one makes a change to a better package without taking all possible steps to reap the full benefits of publicity, and experience has shown that not the least of these benefits come from publicizing the design change with the producer's own sales organization.

How Pillsbury Flour Mills Co. moved to scrap the traditional labels of seven of its fast-selling cereal products and put them all in sparkling, modern "family" dress was told in the May issue of MODERN PACKAGING. This is a sequel—the story of the follow-through that put the new packages over with the sales force.

Pillsbury's methods may well serve as a model for all packagers faced with the problem of merchandising a package change. With a presentation that might do justice to the new models of a motor car, the new packages were unveiled dramatically and forcefully.

This is the year that the Pillsbury Company celebrates its 75th anniversary. An anniversary year was regarded as a "natural" for a change of a major nature. The celebration of the diamond jubilee keynoted the entire plan for bringing the new labels to the attention of the sales personnel. The theme was developed that a change of this sort, setting the pace for future increased sales, shows unmistakably the "looking forward" spirit of this large organization—the "pioneer spirit that characterizes its span of three quarters of a century and presages its future growth."

The nation-wide divisions of the company and problems of

distribution were studied with an eye to the correct order in which the presentation should be made to them. Then a series of meetings was arranged in key cities. Several of the organization's sales executives were enlisted to preside at these meetings, and the group embarked on a series of "one-night stands."

With the 75th-anniversary theme predominant, a well-arranged program was worked out for each meeting. Basically, it was as follows:

1. A brief talk to set the stage for the meeting proper.
2. An illustrated dramatic story of the company's progress.
3. A brief review of trademarks and labels in general.
4. An illustrated history of the company's products.
5. The presentation of the new labels.

The brief talk that opened the meeting called specific attention to the diamond jubilee year and heralded the meeting itself. Stressing the fact that the company has always been what might be termed a "family firm," the speaker brought out the point that the 75th anniversary was occurring at a time when vast changes were in progress everywhere in the food field. Plans for the meeting itself had been in the making for many months, he said.

In order that the company's history might be properly and interestingly presented to the salesmen, a well-known artist was given the task of preparing a series of large "flip sheets," each portraying a milestone in the progress of the organization. These sheets, done in a rather light, humorous vein, gave a concise, graphic panorama of the company's progress, from its unpretentious beginning in the year 1869 up to the present day and looking forward to the future. The running commentary which accompanied the flip sheets also served

to highlight the history of the company. Commentary and flip sheets were met with interest and enthusiasm by newcomer and sales veteran alike.

From this capsule history of 75 years of growth from a standpoint of milling operation and sales activities, the program launched into a review of the development of the company's packaged products, from the original packages to those now featured on the nation's grocery shelves. An integral part of this section of the meeting was a review of grocery product merchandising for the last 75 years. These eras were termed:

1. *The Trading Post Age.* This was characterized by the sale of all merchandise in bulk. Brand names were unknown. The manufacturer had no way of labeling his merchandise.

2. *The Transitional Age.* At this time, take-home packages first began to appear in grocery stores. The packaging of grocery products improved sanitation, made handling more convenient, and offered opportunity for the branding or labeling of products.

3. *The Streamlined Age.* This period saw a refinement of labels and trademarks, with their guarantee of the integrity of the product, and the development of brand consciousness on the part of the consumer.

The commentary used in connection with this set of illustrations led into a résumé of the use to which attractive designs have been put by various industries in improving the sale of their products—products which range from bathtubs to automobiles. How famous products are identified by their equally famous trademarks; and how behind these trademarks are the designers in whose fertile brains the trademarks are born, was fully discussed.

The next section of the presentation told how the Pillsbury Company had long felt the need for a trademark which would bind its entire family of foods into a unified group and how, with this thought in mind, the problem was placed before one of the foremost label designers in the country. Heretofore, the company's advertising agency had handled all changes in labeling, through the medium of its staff of artists, but the present highly specialized nature of such work made it advisable for the company to solicit the aid of an outstanding specialist in this specialized field, the salesmen were told. The designer who was chosen, Jim Nash, immediately entered upon intensive study and exhaustive research before attacking the design problem itself—riding delivery trucks, frequenting grocery outlets, gathering knowledge from wholesalers and retailers everywhere—and, the speaker said, this research and study paid dividends in the form of package unification.

At this point, the commentator selected one of the Pillsbury products and traced it, by means of a cardboard showcase display card, from its inception to the present package, showing the evolution by steady steps, with improvement marking each change. After the present package, the latest on grocery shelves, was reached and the thinking regarding it explained, the newly designed package was dramatically revealed by

2—Eighteen "flip sheets" like this one, breezily told the story of the company's 75 years of progress. 3—The value of trademarks was brought home to the sales force with this display, showing, on the left, famous emblems by various designers and on the right, other labels by Jim Nash, designer of the new Pillsbury packages. 4—The original, the present and the new—offering a striking study in package redesign and modernization.

1912



PILLSBURY FLOUR MILLS COMPANY EQUIPS  
SOME OF ITS SALESMEN WITH AUTOMOBILES.

Kellogg's

Pillsbury's  
BEST  
XXX  
Household Flour

RCA

NEV

57

OUTSTANDING LABELS  
IN THEIR FIELD

Calumet

Karo

Duff's

MAZOLA

Karo

SWANS  
DOWN

2

Porch

Fudge

Mc

TEA

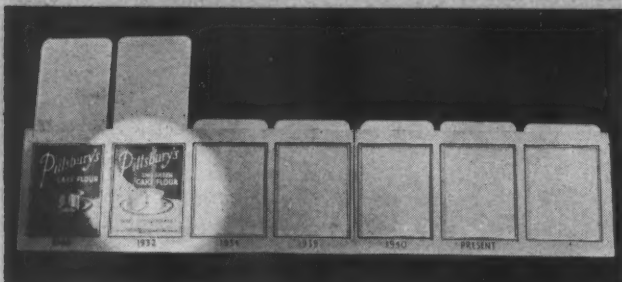






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means of drawing the gray satin curtain on a miniature, spotlighted stage.



6

A burst of cheers and applause greeted the unveiling of the new package—the merchandising possibilities, and their whys and wherefores, were brought home graphically to every salesman.

The miniature stage, with its graceful proscenium arch of natural wood, its soft gray curtain, and the backdrop and floor of the same neutral material, also featured a built-up platform on which the new package reposed proudly—much like a gem in its satin-lined case—spotlighted from above and from below by lights focused to create the maximum dramatic effect.



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The unveiling of each new package was followed by the showing of a small “pop-up” display of package fronts, presenting a clear picture of the way the striking new packages will command shelf prominence in both service and self-service outlets.

Then came a similar dramatic presentation of each of the other packaged products, reviewing all the steps in the development of each label from year to year, with the new package front for each product finally highlighted on the miniature stage.



8

Pillsbury's Pancake Flour, Buckwheat Pancake Flour, Enriched Farina, White Corn Meal, Yellow Corn Meal, Hominy Grits and Sno Sheen Cake Flour—all stood revealed as a new, unified Pillsbury family of foods. Gone was the unrelated appearance that had characterized the former package group and in its place was an indissolubly linked unit of packages, all strikingly beautiful and instantly identifiable as members of the Pillsbury family.

The new identifying symbol, the Pillsbury “P,” is a prominent feature in the case of each of the new packages and is characteristic of the outstanding three-dimensional effect for which the designer is noted. With the appearance of this new symbol on all six sides of each package it was pointed out, the identity of the product is never lost, regardless of the position of the package. Through the skillful handling of the colors used, an unusual diversification of effect is achieved.



9

During the period in which plans for the new package designs were being formulated, secrecy clothed all operations, in order that no advance information might reach the field sales force and “steal the thunder” of the tremendous merchandising possibilities of this major change. Caution was exercised by everyone even remotely connected with the plans and, as a result, the surprise element lost none of its punch.



10

Sales figures since the unveiling of the new labels to the sales personnel have shown a marked spurt, demonstrating the effectiveness of the presentation and the enthusiasm with which it was greeted.

At the time of the presentation to the sales personnel, a special presentation was made also to the staff at the home offices of the company. Again, the enthusiasm expressed showed the unmistakable wisdom of this type of presentation and carried forward the company's slogan of long standing. “Every Pillsbury Employee a Pillsbury Salesman.”

(Page 86)



11

5, 6, 7, 8, 9, 10, and 11—Dramatically, the evolution of the Sno Sheen label through the years was presented by means of this seven-step display. The spotlight moved from panel to panel as the masking cards were lifted, and the new design showed up brilliantly in contrast.



# Castoria comes back

Fletcher's Castoria, removed from the market by the manufacturers more than a year ago, is back in a new package, safeguarded by what are perhaps the most elaborate and rigorous scientific controls ever devised for a proprietary medicine.

It was in May 1943 that it was discovered that children were being made ill by Castoria. Promptly, the manufacturers, the Centaur Co. Division of Sterling Drug, Inc., stopped all retail sales and called back millions of bottles from druggists' shelves, announcing that no more Castoria would be manufactured or sold until the mysterious cause of the malady had been found and corrected. This unhesitating action was generally conceded to have retained public confidence in a very delicate situation.

After the difficulty was established, some further months were consumed in setting up elaborate controls to make certain that this could not recur, with the result that the product now undergoes no less than 138 separate tests before it is released for sale.

Returning to the market involved some very interesting packaging problems. It was essential to retain the recognition value of the well-known Castoria package, but at the same time it was very important to distinguish this as the new formula—distinct from the former package—and to call attention to the new control number, stamped on each bottle label, which guides each batch of the new Castoria through its 138 laboratory tests.

How well and simply these aims have been achieved is demonstrated by the photograph comparing the old package on the left, with the new.

The same red-and-buff carton is retained, with one important change. Formerly the lower panels, giving ingredients and instructions, were identical on front and back; in the new carton, this information is retained in the back but the front panel features a narrow window, circled in red, directing attention to the control number on the bottle within. The words "Laboratory Tested, Control Number," are printed in red in large type just above the window.

Formerly the paper band encircling the middle of the carton, featuring the signature of the originator, was buff with narrow red bands at both edges, and the signature was in red. Unmistakable distinction is given the new package simply by using a green band, without borders, printed in black. To the new band also have been added the words: "Laboratory Tested."

The open window was considered preferable to printing the control number on the carton itself, for several reasons. In the first place, it catches the eye of the purchaser, and seems to carry greater conviction that the actual contents of the package, rather than the package itself, are control-numbered. Secondly, it simplifies the packaging operation, since otherwise it would be necessary to correlate the numbers on the carton and the bottle, and two imprinting operations would be required. The latter course was first considered and then rejected in favor of the window carton. A further consideration was the fact that with numbers on both cartons and bottle, there would remain the possibility of a mix-up in numbers which, although it would not affect the safety of the product, might be damaging to customer acceptance.



1—New Castoria package (right) contrasted with old which was withdrawn from sale a year ago. Control number, showing that the product has gone through 138 laboratory tests, appears on bottle label and is visible through red-bordered window. Color signature band has been changed from buff to green to identify new tested product.

Packaging is done strictly on a batch basis. A single batch of Castoria amounts to several hundred gallons, and one batch is sufficient for one day's packaging. The control number is the same for all bottles packaged from the same batch, which may be as many as 25,000; therefore labels are received already imprinted with a number in sufficient quantity for one batch. The control number for the batch, then, is taken from the labels to be used in bottling that batch. This number follows the batch through all manufacturing operations and is carefully affixed to all the samples taken out for the long series of tests. The number appears on the formula card for the batch on which all ingredients are listed; each ingredient is checked on arrival and again before using.

Since only one batch is bottled each day, there is no possibility of confusion in control numbers. After each batch is run through there is a complete clean-up of filling machinery with live steam. Should operations be speeded up later, it will still be possible to make this complete break between batches—at lunch time or between shifts.

During bottling, a filled bottle is taken out every half hour for a final laboratory spot check.

The packaging operation at Centaur's Rahway, N. J., plant is completely automatic. New bottles are blown out with compressed air and move on a conveyor line to vacuumatic filling machines. They are immediately machine-capped. Two arms line up the bottle in correct position, a roller applies glue to the bottle and the label is applied and firmed by a soft rubber pad. An expansion-and-contraction table absorbs variations in the speed of operation and allows for an inspection operation. Circulars are automatically folded and placed over the end of the bottle. Cartons are sprung open, the bottle automatically slides into place, tabs are pulled in and glue applied and the tabs sealed under pressure. Cartons are then piled and wrapped automatically in kraft paper by dozens. The standard shipping case holds six dozens.

The all-important control number (Continued on page 148)



1—Visual packaging and convenience for both buyer and seller are the principles on which Cream-O-Specialty Sales Co. has built a \$1,250,000 business with 5- and 10-cent baked goods units like the ones illustrated here.

## A million-dollar idea

For H. A. Shenkman, packaging has run a \$10 shoestring into a million-and-a-quarter-a-year business. His Cream-O-Specialty Sales Co., of Brooklyn, started 14 years ago with little more than an idea and a roll of cellophane. It was one of the first to market prepackaged baked goods in attractive 5- and 10-packages, and today those nickel and dime sales keep a dozen factories busy in Brooklyn and New Jersey.

The principles on which the business was founded have been followed consistently. As Shenkman expresses it: "We put out some carefully selected bakery items, retailing at 5 cents. We packaged them attractively, usually with the product visible. We made it easy for the dealer to sell and for the customer to buy, using the package and the display unit to achieve those objectives."

The factory on the original Brooklyn site has spread to take in 10 neighboring buildings; a total of 15,000 sq. ft. of a building in New Jersey has been put into service, and a large bakery in Brooklyn has been acquired and devoted to the manufacture of ice-box cookies. Despite all this expansion, the company barely manages to gear its production to the demand for its output.

To those already established in the baked goods business, Shenkman's entry into the field in 1930 might have appeared the height of folly. He had joined the staff of a large piano manufacturing company in 1923 and in six years had risen

from office boy to assistant to the vice-president and general manager. It was obvious that he had an excellent future with that organization. But he believed that the piano business was in for some hard sledding, unless radical changes in merchandising were made, and these his superiors were unwilling to undertake. So he decided to go into business for himself and to choose a line of food products, which—unlike pianos, he reasoned—would find their market in hard times as well as boom days.

It might have seemed that he was entering an overcrowded field, but he knew there was no baked goods house at that time specializing in 5-cent items and baked goods were not packaged as appetizingly as they might be, he thought. So he went to a large biscuit house and talked one of the executives into letting him buy some saltines, in bulk, on credit. He spent his last \$10 on packaging material, chiefly cellophane. Then he and a friend wrapped the packages, took them around to dealers and sold them. Thus, presumably, was begun the practice of using the eye appeal of a baked goods product—through encasing it in a transparent covering—as a selling aid.

Young Shenkman's business grew rapidly. He used a store building as headquarters and covered the trade with a wagon. He added more lines and obtained more credit from manufacturers. Leaving his partner to cover New York, he went



on the road and obtained distributors in one region after another—always using the inducement of the ease of moving 5-cent items (a potent argument during the depression period) and the attractiveness of the packaging of his products. Gradually the company began to manufacture some of its own lines, though it continued to concentrate on turning plain biscuits and cookies into specialties, through such methods as converting them into sandwiches or dipping them in coatings. Shenkman's relationship with the large manufacturers in the field was reversed as his company began to sell its specialties to them for distribution under their own brand names.

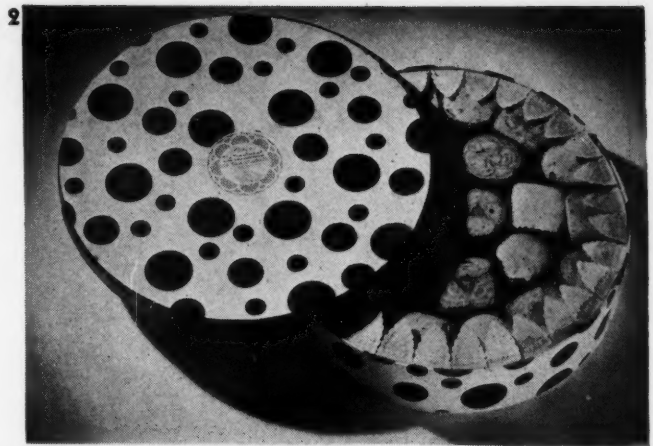
From the first, Mr. Shenkman regarded the package as all-important and he gives credit to MODERN PACKAGING and other business magazines as well as packaging expositions, for keeping him informed of developments that he could adapt to his own purpose. For example, an article clipped several years ago on the sales appeal of colors has been used repeatedly as the basis for his choice of colors for packages.

There have been many instances of proof of the important role played by the package in the acceptance of his products, said Shenkman. There was, for example, the time that one of his associates brought out a new package without consulting him, a package which did not incorporate the principles he had come to depend upon for winning acceptance for a new item. In its drab dress, the item, a chocolate-coated graham cracker, was a failure. It was withdrawn and brought out in a new well-designed and colorful package, and this time it clicked. It now has national distribution and is selling in volume.

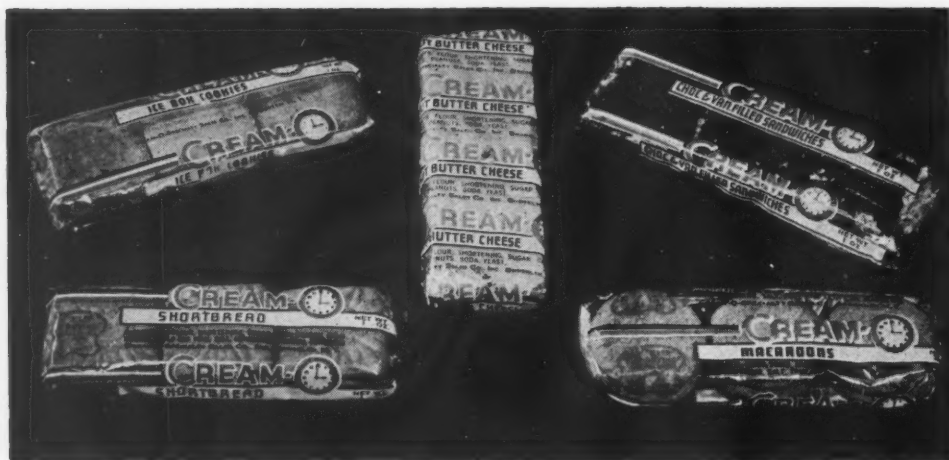
Another instance proving the value of good packaging is to be seen in the history of the firm's acquisition of a baking subsidiary. In 1942, when many types of foods were becoming scarce, and when it became evident that the United States must increase its food production capacity to supply not only our own demands but those of our Allies, Shenkman felt that the company should increase its production facilities quickly. As a step in this direction, he located a baking company which had been steadily losing money. Investigation showed that its management—so far as production was concerned—was good; that the proprietor was highly capable; that the firm's products were of high quality. Its failure, Shenkman reasoned, was due to poor packaging and marketing methods. Its high-grade cookies, for example, were offered to the trade in bulk, in shoe-box-type containers. Those same cookies, packaged attractively in five-cent units, now have national distribution under the trade-name Tick-Tock, and that division of the company has been making a profit ever since it became a part of the successful Cream-O family.

A striking characteristic of the company's management is

**2—Two-pound cookie gift box is attractively done in a blue-on-white dot pattern producing a circus effect. It comes in a square shipping carton for mailing. 3—Variety assortment of nickel cookie packages forms an effective display unit. Note that the packaging is designed for full visibility of the product, with the trade name repetitively printed on the cellophane wrappers. Color scheme for the Cream-O line is red and white. 4—Display carton for the Tick-Tock line of ice-box cookies stresses the time element since they are ready-to-eat foods. Color scheme is yellow and black for both the wrap-around label under the cellophane and for the display carton itself.**







5—These printed-cellophane wrapped noveltypackages are sold through vending machines by Cream-O, which was a pioneer in this type of bakery product merchandising.

5

its flexibility. This has been a factor in solving some of the problems arising from our participation in the war. In packaging, this has meant the use of substitute materials and, at times, the inability to adhere to family color schemes. It has meant the use of handwork in the face of expansion which made existing machinery inadequate.

The growth of the business has followed a certain pattern. Briefly stated, it has consisted of taking a small unit of space in a locality and turning out a line of specialties under a family trade name, then taking more space and adding to production facilities as sales volume rose. In the original Brooklyn plant, products are marketed under names beginning with "Cream-O". Since the foods are ready-to-eat, the time element is stressed, and some of the foods are sold under the name, "Cream-O, the Minute Meal." The "O" of the trade-name is usually shown as the dial of a clock. The color scheme for the line is red and white. This appears in the set-up display units and in the boxes furnished to dealers. Labels for individual cellophane-covered units in this line are red with white lettering. MST cellophane is used, the company having its own cellophane-cutting machine.

For the Tick Tock line, made in the bakery in another section of Brooklyn, the color scheme is yellow and black. For the New Jersey plant's products, the color scheme is blue and white. The products of this plant are marketed under the name "Jersey." The major function of this plant is the production of peanut butter, from raw peanuts, and the manufacture of chocolate or cocoa mixtures in which crackers are dipped. The biscuit products in the "Jersey" line are made by the same formulas as those in the Cream-O line, although they use other brand names to obtain wider distribution.

In recent years, the Cream-O Company has had considerable volume in items sold through vending machines. Foreseeing the labor shortage, Shenkman approached owners of vending machines several years ago and suggested that they buy packaged cookies and biscuits to be distributed in this way. They were skeptical, but he finally got one to experiment with the plan after extending a sales guarantee. This necessitated his buying biscuit cutters of special sizes and furnishing them to a baking company which made the food products, later packaged in the Cream-O plant. As is commonly the case, success in this type of distribution has induced others to enter the field, and some of the largest bakers in the country are now using vending machines.

The company now has approximately 250 employees, of whom about 80% are engaged in such operations as dipping, sandwiching, packaging, labeling, sealing and packing the

various baked novelties into boxes ready for shipment.

Following the "assembly line" through, in the original Brooklyn plant, we find a worker putting crackers into 14 magazine slots, at the rate of 45 to 60 a minute, with the crackers passing through on belts, to receive, from a plunger, daubs of cream, then to be covered by another cracker to form a sandwich. These are removed by hand and put into large boxes and transported to a station in another section of room, where girls fit fluted glassine collars about the sandwiches, which are then fed into a wrapping machine and heat-sealed with the label inside the cellophane wrapper. The packages come off the machine at the rate of 90 per minute. They are placed, by hand, into the set-up boxes which are both shipping and display units.

In the bakery where the Tick Tock ice-box cookies are made, there is more hand work, this being characteristic of the product and accounting for its relatively higher price. The dough mixture is shaped in round or square cylinders, cut off in lengths about 16 in. long and placed in a refrigerating unit for 24 hours, then sliced mechanically and baked in long trays. The cookies are packaged by hand, two to a red fluted waxed paper cup, and placed on cardboard strips. The bottoms of the cardboard strips are imprinted with the brand-name of the product and other information, thus forming the label and leaving the cellophane-covered top free to give full visibility to the product. Although the major part of the bakery's production is in 5-cent units, there are also 10-cent packages of the ice-box cookies. There is also a 2-lb. gift package in an attractive white box with a pattern of blue dots producing a circus effect. The gift package comes in a square outer carton designed for overseas mailing, and retails at a figure in the neighborhood of \$1.75.

There has been careful planning to ensure adequate supplies of packaging materials. In some instances, as stated previously, substitutions have been made. Plain, instead of printed cellophane is now being used for some wraps. Larger units are packaged when this is feasible. Dealers have been urged to return shipping cartons, Cream-O paying the shipping costs. In the three days immediately preceding the visit of MODERN PACKAGING's reporter, 700 cartons had been returned. Manufacturers' cartons are returned to them or otherwise re-used.

A depression-born business which has expanded many times over during the period of wartime shortages, a business which conquered the problem of competition on the part of older and larger firms, a company has turned disadvantages into advantages—Cream-O is an organization from which other packagers can learn.

# Automatic link sealing in film

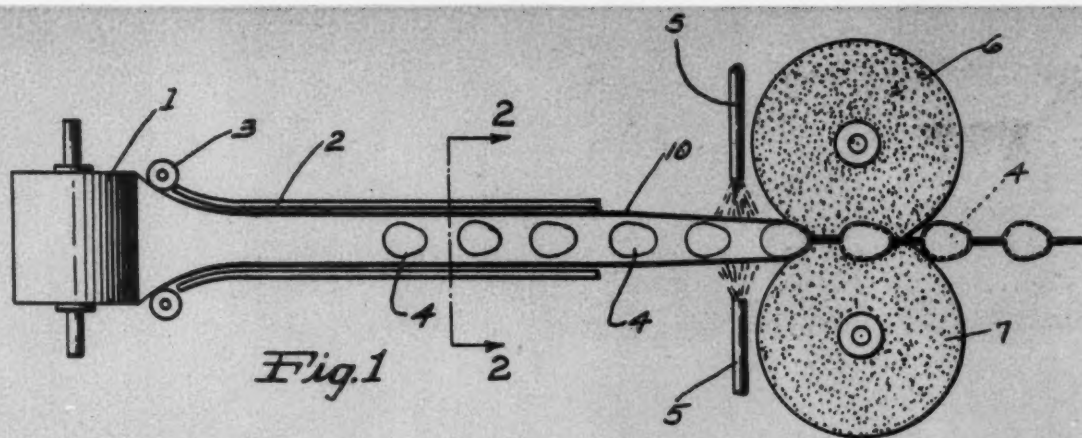


Fig. 1

Eggs and other hard-to-handle products may be automatically packaged and sealed in rubber hydrochloride film, like links of sausage, according to patent papers assigned to the Wingfoot Corp., subsidiary of The Goodyear Tire & Rubber Co. It is expected that the method will be applicable not only to eggs but also to golf balls, soap bars and a multitude of other irregularly shaped products which will benefit by airproof and moistureproof protection.

Although purely a project for postwar, the machinery for handling such packaging has been developed and patented by A. B. Clunan, manager of Pliofilm sales for the Goodyear company. The equipment is relatively simple, and Mr. Clunan states that it will compare favorably in cost with similar types of packaging machinery.

Because the film is stretched tightly around the product, as in the case of eggs, and all air excluded by means of heat-sealing, unusual preservation is provided for any product which would be subject to deterioration in air. The preservation of eggs is said to be comparable to that previously obtained by submerging them in water glass.

In the accompanying drawings, taken from Patent No. 2,340,260, Fig. 1 is a plan view of the patented apparatus. Fig. 2 is a cross-section on the line (2-2) of Fig. 1, and Fig. 3 shows a number of eggs packaged in a single strip of film.

The film is fed from the roll (1). This may be rubber hydrochloride film of the type normally employed in packaging, preferably transparent, unplasticized film of about .001 in. thickness. As the film is drawn from the roll it passes through a trough (2). The guide rolls (3) aid in causing the film to lie flat in the trough. As the film (10) is drawn through the trough, eggs (4) are gently laid on the film, either by hand or by mechanical means, at suitably spaced intervals. The trough or that portion of the trough where the eggs first contact the film is made of or lined with some suitable cushioning material to prevent breakage.

Leaving the trough, the film is heated by any suitable means, but preferably by blasts of hot air from pipes (5). The film is preferably supported from below, especially while in the heated condition.

The heated film carrying the eggs is then drawn between two large cushioned rollers (6 and 7). These are preferably composed of sponge rubber, so soft that they press closely around the eggs without breaking them yet with sufficient pressure so that the portion of the film not contacting the eggs

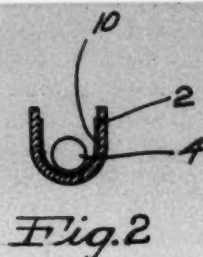


Fig. 2

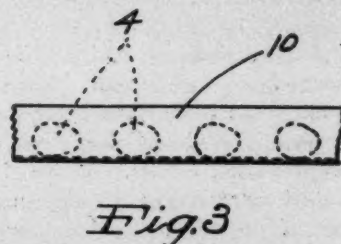


Fig. 3

is sealed together. It is suggested that in automatic equipment there may be cavities in the rolls (6 and 7) so spaced as to receive the eggs and thus prevent or lessen the application of pressure on the eggs.

The rolls remove the air from between and around the eggs as they press the film together and stretch the heated film over the eggs. The wrapped eggs emerge from the rollers tightly enclosed in the film and individually sealed, as shown in Fig. 3.

The strip may be severed between the individual eggs, or they may be cut off in strips of a dozen or in any units desired.

There are several possible modifications of this operation. One would have the film heated as it leaves the roll (1) and stretched to several times its original length, so that the eggs or other objects are wrapped in the thinner, stretched film. The same heating required for stretching may be used for sealing the film around the eggs. A single heating step may be used, and the blower pipes (5) may then be omitted.

At present, practically all rubber hydrochloride film is devoted exclusively to moisture protection of military products, and no attempt is being made to provide such equipment for commercial use now. Indications are, however, that the method is due for important postwar consideration.





*Note early pouring spout of plastic and change to the popular 2-lb. consumer unit introduced in 1907.*

## Fifty years of salt canister styling

The Worcester Salt Co. is about to introduce a new label for its Ivory and Ivory Iodized salt. The new design is one of the last done by the late Arthur S. Allen.

Behind the design is an interesting story of 50 years' evolution in the packaging of salt. In the eight different stages shown in the illustrations of this company's cartons is the whole history of package protection, convenience, eye appeal and economy, yet at the same time, one is impressed by the similarities of the early package with the current ones.

E. H. Pendleton, vice-president of the company, has been an eye witness to this evolution. He joined the Company in 1898, when the first package, introduced in 1894, was still being hand-filled, and has seen the packaging changed from a hand operation to a fully automatic high-speed one handling thousands of cases a day.

The company, or rather Nash Whiton & Co., predecessor of the present Worcester Salt Co., adopted a round carton when they first began packaging table salt in 1894. This was not so different from the containers marketed today, except that it contained 4 lbs. of salt and was so big the housewife could hardly get her hands around it for a good grip. This size unit was changed in the early 1900's to a 2-lb. package which is still the popular unit of sale.

Prior to the final quarter of the last century salt brine was evaporated in open pans and the resulting product reduced in size by crushing and grinding. About 1887 Joseph M. Duncan at Silver Springs, N. Y., invented the vacuum pan evaporation method of making salt. This opened the way for mass production of salt in America and also meant a product of fine luster, even grain and crystals of nearly perfect cubical shapes.

The fine salt thus produced and the discovery that by the addition of carbonate of magnesia the salt could be made

free-running offered an excellent opportunity for the packaging of fine salt to be offered to the housewife in a neat carton that could be kept on the kitchen or pantry shelf.

The word "Ivory," because of its pleasing and appropriate connotation, was chosen by the Worcester Salt Co. as its brand for this type of salt. An elephant's head was selected as the trademark: first, because it was easy to remember; second, because of its association with Ivory, and third—a symbolic reason. During the Middle Ages, guests at the tables of the well-to-do were seated according to rank with respect to their location around a massive silver salt cellar centerpiece. Distinguished guests sat "above the salt" at the head of the table. One magnificent salt cellar in the form of an elephant was the property of John, Earl of Warrens, in 1347. The elephant on this salt cellar was the "ancestor" of the fellow who has been pictured in various poses for 50 years on packages of Worcester's Ivory salt.

The original 4-lb. package adopted in 1894 was of convolute construction with a formed lid and base. The base was glued on, but the lid was sealed on the container by the label. It was tamper-proof, since the label had to be cut before the lid could be removed, but it was inconvenient to open. This label was an elaborate affair with green background and green and gold printing.

First important step in the improvement of this package to meet the merchandising demands of the twentieth century was taken about 1907. At that time, the package was made smaller—a 2-lb. unit for convenience. The first pouring spout was an added feature. A cardboard covering was recessed inside the top and from it projected a short nozzle plugged with a removable cork. The nozzle was a molded thermoplastic device. Records do not show what the plastic was, but tests show it to be made of an





*Elephant trademark has been retained throughout, but design has been simplified for better display.*

asphaltic compound similar to those still being used for some purposes today. An outside lid covered the whole elaborate arrangement. The color of the label was changed from green to orange—the same color that is being used for the background today, but greatly improved in hue by scientific color selection. The name Worcester appears on the 1907 package for the first time—so named for the fine salt which once came from Worcestershire, England.

The recessed covering and plastic spout, requiring an additional cover, must not have been a completely satisfactory solution to the dispensing feature of the carton, for the package used by the company in 1910 was a step toward simplification. The single shell lid was equipped with a hole stopped by a removable aluminum plug. This was inconvenient in that you had to use a knife or break your fingernail to get it out. When you did, the tiny piece of metal was separate, difficult to replace and easily lost.

A few years later, about 1917, the package appeared equipped with a triangular pouring spout of aluminum made by the American Aluminumware Co. of Newark, N. J. This had the advantage of being permanently a part of the container and could be raised while the container was in use and closed for storage.

About 1926, the company introduced a parallel sided pouring spout, which is the same one that is used today, but the modern version is more securely fastened. Some paper pouring spouts have been used as a wartime substitute. The only improvement to the present metal spout is an indenture below the spout and a recessing of the metal part to provide a slight elevation for easier opening.

Another interesting feature of the package is the use that has been made of the seals over the pouring spouts. The original seal over the triangular spout was a premium offer, a United Profit Sharing Coupon. Later the premium offer was dropped and a glassine seal was used for better protection and to call attention to the pouring feature.

Many improvements have been made throughout the course of the years in the structural strength of the packages and in the protective features. The present containers of fibre laminated with asphalt, it is said, will withstand the weight of a 150-lb. man. The asphalt lamination is added protection against moisture. Salt is somewhat hygroscopic.

It will cake if too much moisture reaches it. Additives of compounds which coat the salt crystals have eliminated caking and allow the salt to be free-flowing under ordinary conditions. Excessive moisture, however, such as may be experienced in the tropics or at the seashore, will affect the free-flowing qualities if the container seal has been broken. Added protection against moisture is provided by the asphalt lamination. The company has used such cartons at least since 1915. A Worcester Salt Co. booklet explaining the making and packing of salt, published about 1915, records the following on this subject:

"Our new style carton for Ivory Salt is made of double thickness of moistureproof fibre. In addition to this it has an inner layer of asphaltum, making an unusually sturdy, weatherproof package."

The 1944 labels, just completed, were inspired by a desire on the part of the company to simplify the appearance of the carton to give a more striking shelf value and ready consumer identification. The side panels of the package, heretofore filled with doubtfully visible reading matter, now just carry the brand name "Ivory Salt" or "Ivory Iodized Salt," running horizontally to make for easy identification when the package happens to lie on its side in the bin.

Shortly before Mr. Allen's death, he was called in to work out this redesign and the conclusion and production of the labels were carried on by his staff.

Mr. Allen, who devoted a lifetime to the study of color, decided that the orange background could be improved. Experiments were made with several hues of oranges and finally a deep orange was selected because this shade soils less easily.

The good old elephant trademark was redrawn and enlarged, but the good luck tradition of the upraised trunk, adopted for the 1932 package, has been retained. The circle on the front and back panel around the elephant is for eye-catching appeal. The name Worcester—too many letters and hard to pronounce—has been subordinated to the trade names "Ivory" and "Ivory Iodized" in the brand name, but will be emphasized in the company name on the label.

*Credit: Fibre containers, American Can Co., New York. Labels, Nevins Church Press, New York.*



## By popular vote

A breath of the North woods has been captured and put in bottles for the masculine members of the family by Etttoh Products Co., Inc. Their matching line of men's toiletries includes cologne, bath oil, hair groom, skin lotion and shaving lotion—all pine scented and sold under the trade name Balpine.

Since only stock bottles are available at this time, the manufacturers decided to dress up these square, masculine-looking bottles with unusual, custom-made labels and closures.

The wooden closures, stained a greenish color, are made by the company itself, which had its own tools designed for cutting and shaping. A standard metal screw cap acts as the liner.

The adoption of the label is a somewhat longer story. First 20 ideas were solicited from people who sell cosmetics and, therefore, know what type of label is apt to stop the public eye. Next, three of the designs, picked by popular vote at a sales convention, were interpreted into color sketches. Then these three sketches were circulated by mail among customer buyers to arrive at the one that rated highest. The final result was made up into a decalcomania and adopted as the label for the entire family of Balpine toiletries for men.

According to company officials the complete package is so successful that productive capacity of the plant has been swamped and booked Christmas business is already beyond any figures for previous years.

*Credit: Bottles, Swindell Bros., Baltimore, Md. Labels, Meyer-cord Co., Chicago.*



# DESIGN

## Success story

Richard Hudnut's "Charm School" course is now going into the home in a brand new "treasure chest" which is more practical, cleanable and more abundantly equipped than its predecessor.

Hinge-lidded, this 17 by 13 by 3 1/4-in. box is designed to fit into any boudoir—either opened on the dressing table or closed in a bureau drawer. Naturally the chest had to be of some uncritical material so the designer chose wood for durability and dressed up its pale blue finish with the silkscreened, pastel-colored, flower-printed word "Success."

Immediately inside the box is a large kraft envelope which contains the "Success Course"—exercises, diets, directions for the use of the cosmetics, facial tissue and an envelope of colored crepe paper capes to be used by the pupil in selecting clothing shades.

The die-cut paperboard platform holds 17 Du Barry cosmetic preparations plus two lamb's wool powder puffs. Of especial interest is the injection-molded, cellulose acetate make-up tray center back, with depressions to hold a lip brush, a mascara brush, mascara, eye shadow, and two kinds of paste rouge. This tray also acts as a cover over a compartment which holds a roll of absorbent cotton, a tape measure and a head band. Nothing a woman could desire for beauty care has been forgotten.

In addition the construction of the box indicates that it can be replenished when any of its supplies run low and still retain its sturdy, attractive appearance.

*Credit: Box designed and created by C. L. Gregg, New York. Box and silk-screening, Danersk Craftsmen, Inc., Stamford, Conn.*



## Pretty baby

Cosmetics for baby! Not lipstick and eyeshadow yet—but all those sweet-smelling things that make the new baby soft and cuddly are being packaged in a specially designed line by Helene Pessl, New York.

The entire line from the large box right on down to the descriptive folder carries the same decorative labels. The background of the design is either pink or blue with the baby pictured in white and touches of the opposite color. Some of each color is included in each box—making the kit suitable for boy or girl.

The super-set, shown at the top, contains everything any self-respecting new baby could want. Eight pieces of pure castile soap, in glazed paper wraps, set on platforms down each side of the box—two in each of the center depressions and one on each corner. The bottled products—talcum, liquid baby cream and baby oil—are in round, stock bottles with phenolic closures. Since it was impossible at this time to get the closures in the desired colors, Miss Pessl simply took whatever color she could get and had them sprayed in the colors she wanted. Two small wax-paper wrapped trays of cue tips make application easier.

The smaller set-up box contains two cakes of soap, one tray of tips, a bottle of the liquid cream and one of the oil.

*Credit: Art work, Eva Heller, New York. Boxes, W. H. Deisroth Co., Inc., Philadelphia. Labels, Ever Ready Label Corp., New York. Bottles, Swindell, Bros., Baltimore, Md. Caps, J. Rabinowitz & Sons, Inc., Brooklyn, N. Y. Spraying, Marvin Novelty & Spraying Co., New York.*



# N HISTORIES

## Boxed cacti

A brainstorm plus some excellent teamwork has brought forth a brand new merchandising idea for Butler Bros., Chicago department store. The horticultural buyer, while on a trip to Mexico last summer, reasoned this way:

"Why not pack a number of cacti in a colorful container which could do duty as a window box and sell it at a popular price?"

With the cooperation of the merchandise development manager and the packaging expert of the store, work was started immediately on the design for a box which would hold the cacti; which would be sufficiently moisture resistant to serve as a container into which to plant the cacti; which would be colorful enough to attract consumer attention, and which would be inexpensive enough to keep the item in a popular-price class.

The results of their combined efforts can be seen in the accompanying illustration. The bright, typical Mexican landscape reproduced in four colors is gay enough to attract attention and at the same time look well enough on a window sill or an end table of the average home.

The bottom part of the box is made of paperboard which has been heavily waxed on the inside to make it moisture resistant. Planting instructions are included in each box.

With each shipment to retailers goes a streamer and an 11 by 14-in. display card showing the planted box in full color. So far Butler's claim that the boxed cacti are selling amazingly well—particularly as a gift item.

*Credit: Artwork, Pontiac Engraving Co., Chicago.*





# Something Old -

# Something New

**T**his war is teaching people to get along with what they have. That observation has been made many times and the condition has manifested itself in many different fields.

MODERN PACKAGING has encountered many instances in which ingenuity and adaptability have triumphed, but in most cases those responsible for the development have assumed too modest an attitude. One man expressed it thus: "There's nothing we can be proud of in our present set-up. We'd like to tell you a story of an installation of brand new machinery, used under conditions of flawless operating efficiency. We'll do it after the war, when we get the new equipment we're planning for. Right now, we're getting along the best way we can and there's nothing dramatic about that."

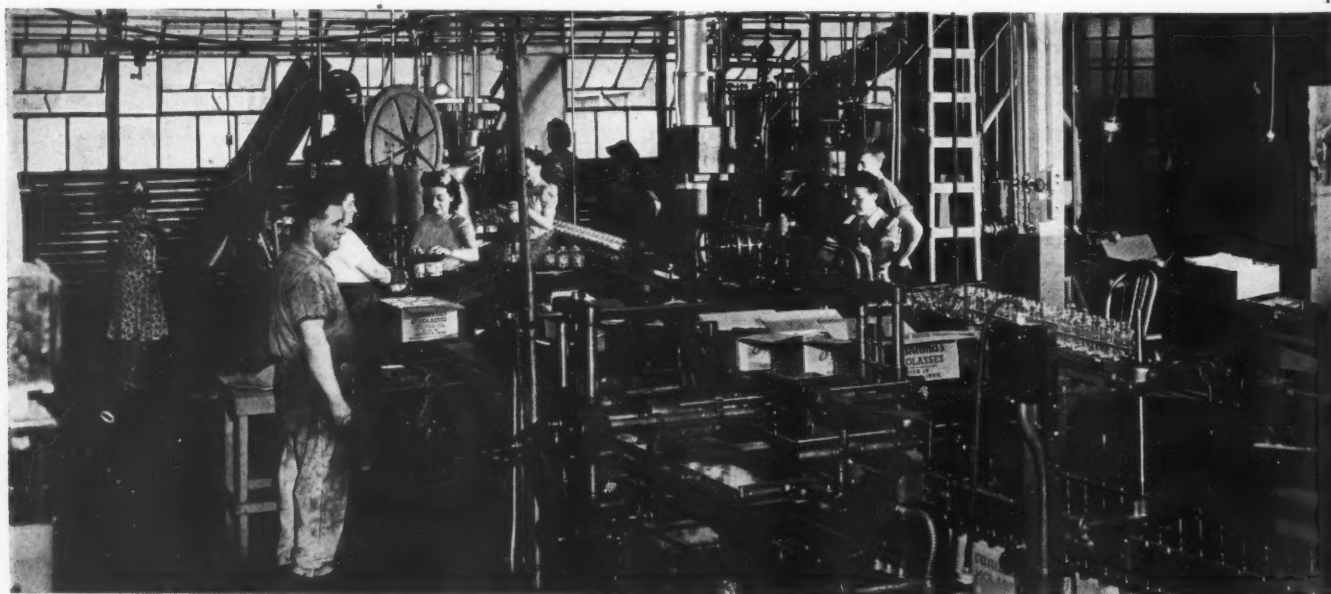
But there is. Behind every such instance is a grim determination to keep the production machine going. When the metal shortages, with their consequent restrictions, caused the American Molasses Co. to drop their familiar tin cans and adopt glass containers, they found themselves facing some equipment problems that called for considerably more than a bit of doing.

As with everyone else, a large part of their volume is being absorbed for direct military use, and that production of course has to be kept going under all circumstances. This article, however, deals with the problems they encountered in keeping up a maximum flow of goods intended for civilian consumption. Here, too, the labor shortage added complications, and on top of it all, only a very limited space could be utilized for their civilian production line. How they were able to devise makeshift equipment, supplement it with

adaptations of used machinery and get along with just a few pieces of new equipment—at the same time conducting their operations with only half their usual personnel—all this is typical of the production story that is going on quietly everywhere in America.

The accompanying diagram of their floor layout shows "straightline" production in the true sense of the word. That is, the operation proceeds in natural sequence, with no lost motion, although literally the units are laid out in the form of a letter "U."

The loaded corrugated containers come out in close proximity to the spot where the empty glass comes in and the entire line occupies little more than 1,000 sq. ft. The empty glass jars for the quarts come one dozen to the case, pints two dozen. Wood pallets, loaded with 25 cases, bring them in from storage and they are placed on a gravity conveyor which carries them to the first station. The top flaps of the cases are unglued. The operator at the first station empties the case, jar openings uppermost, onto the "tilting shelf" of an unscrambling table (one of the very few new pieces of equipment in the line) and then pushes them over onto the moving part of the table top, putting the empty case on a nearby gravity conveyor. The principal mechanism of this table consists of three belt conveyors moving at three different speeds. As a military man might put it, the function of this unscrambling table is to change the "platoon formation from column of squads into single file." Carried by the conveyor belts at different speeds, a V-belt moves them toward the single line conveyor on their way to the labeling machine. The table is a new development which has been installed in



the American Molasses Co.'s plant only a short time. According to their experience, it has reduced glass breakage and enables a single operator to handle glass containers of the quart size at the rate of 72 per minute—faster than the filling machines can fill them.

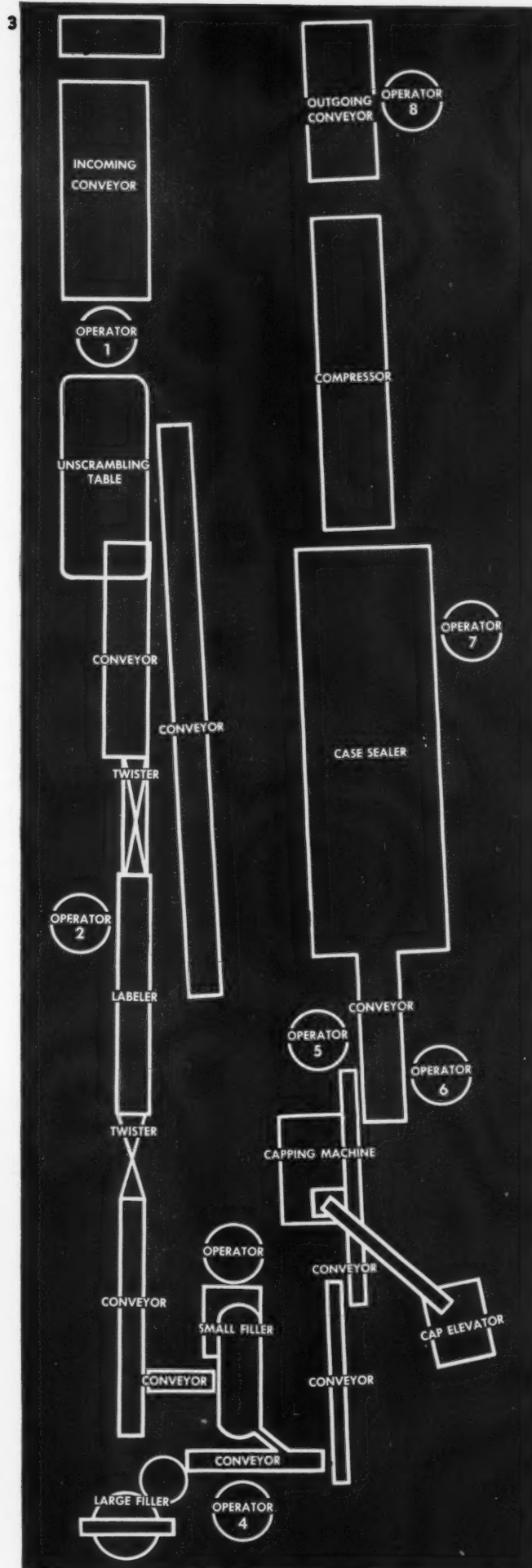
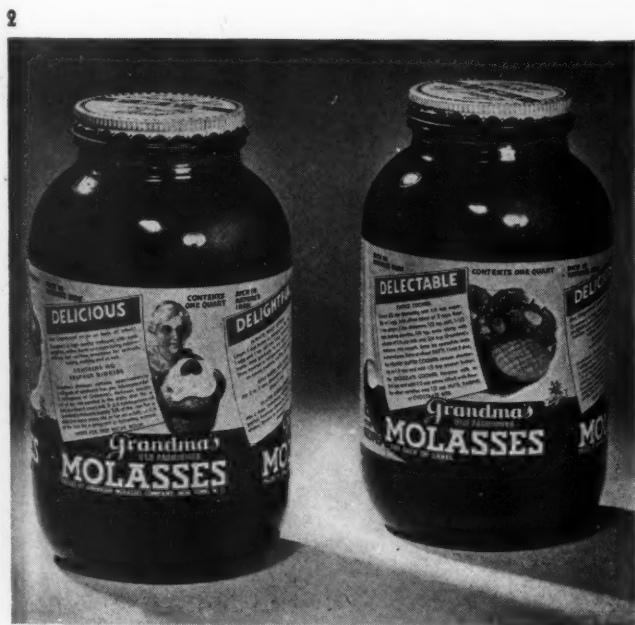
Overhead, above the single-belt conveyor leading from the unscrambling machine to the labeler, is a home-made experimental infra-red ray unit. This is in service only during the cold months and it serves to take the initial chill out of the empty glass jars before they go through the labeling and filling operations.

Moving along an eight-foot length of conveyor, the jars enter the labeling machine after passing through what J. R. Heilmann, engineer, calls a "twister." This device, fashioned by their own mechanics from metal strips, turns the jars so that they go through the labeling machine horizontally instead of vertically. At the other end of the labeling machine, they pass through another "twister" which causes them to resume their upright position.

From here on, until the case sealer is reached, the equipment consists entirely of used machines which have been adapted for this particular purpose after being changed over from other uses. Of course, as the American Molasses officials are quick to point out, it had to meet their rigid sanitary standards before they would actually use it in commercial packaging.

Two filling machines are needed to keep pace with the empty glass as it comes from the unscrambling table. One of

1—Plant layout of the civilian production line makes maximum use of small space. Old and new equipment and homemade makeshifts are fitted together into a smooth-running well-synchronized packaging operation. 2—The Grandma's Molasses package, formerly of tin, uses a colorful label in interesting contrast with the rich brown color of the contents. Consumer information appears on the label in the form of several illustrated recipes. 3—Blue print of the plant layout. The equipment in this packaging line may not all be of the latest design but engineering efficiency is right up to the needs of the moment. Old and new units are synchronized for straight-line production.



these was formerly used to fill their metal cans. They adapted it themselves so it would operate with glass jars. The molasses is fed in by gravity at the proper flowing temperature.

This one converted filler fills 44 quarts per minute—hardly fast enough. After scouring the used equipment market, they obtained a machine to supplement the first one, with a capacity of 22 quarts per minute. "That doesn't add up to 72," Mr. Heilmann explains, "but it gives the girl who feeds the empty glass containers a lead of half a case on the rest of the line."

For the capping operation they again invaded the second-hand market and obtained a machine which was shipped back to the manufacturer who made the necessary changes in the chuck to adapt it to their glass line. Two improvements were added to this machine by the carpenter, if you please, in the American Molasses Co.'s plant. From somewhere they obtained good-sized sheets of transparent plastic, perhaps  $\frac{1}{8}$  or  $\frac{3}{16}$  in. in thickness. One sheet was cut and flexed to enlarge the hopper which contains the caps and now the addition makes it possible to see how full that hopper is at any time without climbing up on the little stairway that is customarily used.

Another sheet of the transparent plastic was then fitted as a shield around the revolving capping chucks, enabling the operator, who places filled jars into the waiting corrugated cases, to keep a constant check on the operation of the tightening device. Similar transparent shields were fitted

to the faster one of the two rehabilitated filling machines.

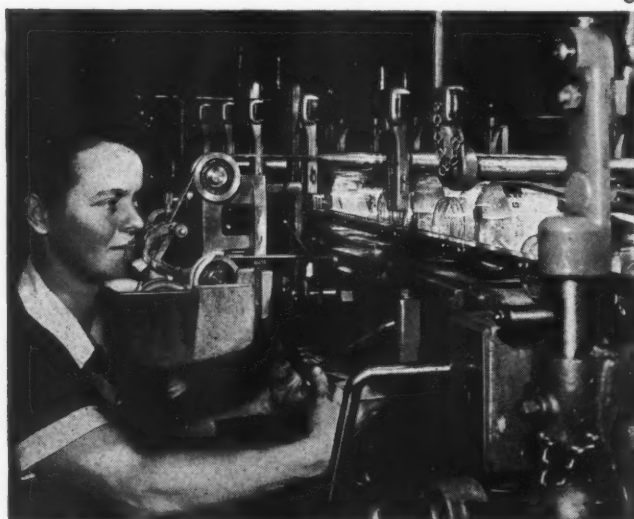
Until recently, one operator's time was taken up with the task of keeping the hopper of the capper filled. The woman-power shortage forced them to devise an elevating mechanism as a substitute. This consists of a sheet metal bin to which a trough is attached and in this trough runs a chain conveyor that picks up anywhere from three to half a dozen caps on each cross bar of the chain, and carries them up to the hopper of the capping machine. This "cap elevator" is a home-made device consisting of old chain, sprockets, used channel iron etc.—but it does the job and releases one employee for other duties.

It should be mentioned that the conveyor lines divide prior to reaching the filling machines, but the proper "allocation" as to number for the different speed fillers is accomplished by means of the human element. An operator simply picks two out of every six from the main line, and puts them on a different conveyor which carries them to the smaller filling machine. Some of these various conveyors are home-made, and others were furnished by one of their equipment manufacturers with the admission "these are second-hand materials, but they're the best we can give you—we'll try and make them do a good job." That promise has been kept. The installation, in operation for about two months as this is written, has been performing satisfactorily.

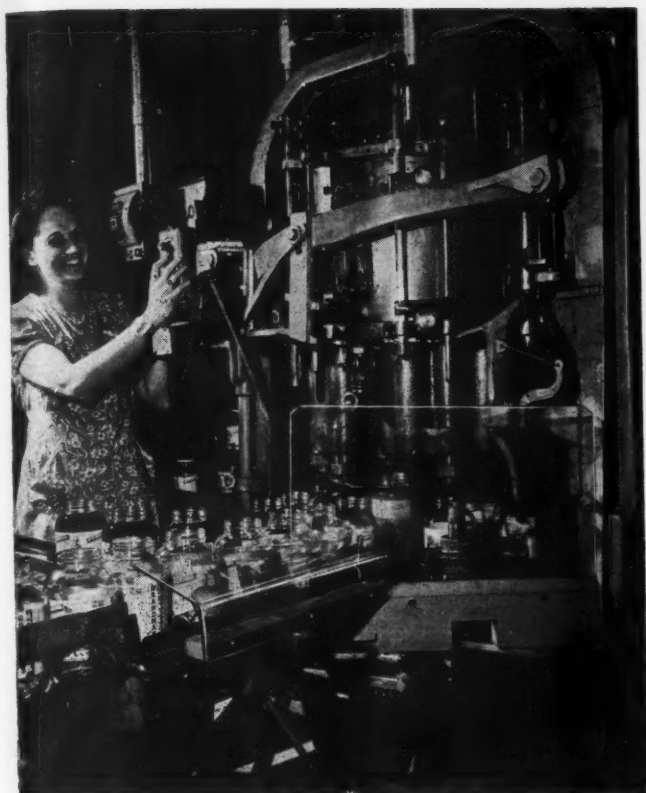
As the filled jars emerge from the capping machine, they are given a final inspection by the operator who packs them in the corrugated cases. These corrugated cases have come



4—With a minimum of handling, the unscrambling unit forms a line of quart jars that travel at the rate of 72 per minute; empty case travels by a long gravity conveyor—just visible at the left—to the point in the line where filled jars emerge from capping machine, ready to be packed for shipment. 5—Jars must be horizontal when labels are applied. A home-made "twister," fashioned by plant mechanics from metal strips, changes the position of the jars from vertical to horizontal as they enter the labeler and another "twister" restores them to a vertical position as they emerge ready for one of the two filling machines. 6—This labeling machine is one of the few new units in the American Molasses line—it is a can-labeling machine, adapted for use with glass, for which priority was granted on the grounds of metal conservation.







7—Found among the discarded equipment in the American Molasses Company's warehouses, this filling machine was rejuvenated and pressed into service. Modern touches are the shields of transparent plastic. 8—This capping machine was located in the second-hand market and sent back to its manufacturers who put it into top operating condition and adapted the chucks to handle "Grandma's" quart glass jars. The plant carpenter enlarged the hopper with a plastic sheet; also fitted sheet around capping chuck enabling operator to keep check on tightening device. 9—This home-made cap elevator, pieced together of discarded materials, keeps the hopper of the capping machine full, though it requires only occasional attention from operator.

to meet their contents by way of a long gravity conveyor which carries them from the unscrambling unit to the operator stationed between the capping machine and the case sealing machine.

Some day the American Molasses Co. hopes to have case sealers and compressors for all their production lines. Now, however, due to the machinery restrictions, one set must do for all three lines. To accomplish this easily and quickly, their own mechanics have put compressor and case sealer on a framework equipped with metal casters. Made of old steel channel bars and other scrap materials, the framework enables these units to be set firmly in place for quart, pint, or No. 10 metal can production line, and two men can make the change-over in a matter of half an hour. In a similar fashion, the small filling unit was mounted on a home-made framework equipped with casters so that it, too, may do duty on all three lines as occasion demands.

Credit: New equipment: Unscrambling table, Island Equipment Corp., New York. Labeler, Burt Machine Co., Baltimore, Md. Case sealer and compressor units, Standard-Knapp Corp., Portland, Conn.

Used equipment, adapted: Large filler, Ayars Machine Co., North Salem, N. J. Small filler, Karl Kiefer Machine Co., Cincinnati, Ohio. Capping machine, Consolidated Packaging Machinery Corp., Buffalo, N. Y. Conveyor lines, Island Equipment Corp., New York.



# PACKAGING



**1** Stressing the convenience angle—Jergen's newest package nests a cake of make-up inside a box of face powder to achieve its "Velvet Twin Make-up." The cake make-up is in a glass base with a paper top. The label is a miniature of the familiar three faces which have decorated the powder box for some time. According to the company the idea behind this 2-in-1 package is to assure the purchase of the right shade of cake make-up intended for use with each shade of powder. Box, F. N. Burt Co., Buffalo, N. Y. Lithography, United States Printing & Lithograph Co., St. Charles, Ill. Glass base, Carr-Lowrey Glass Co., Baltimore, Md.



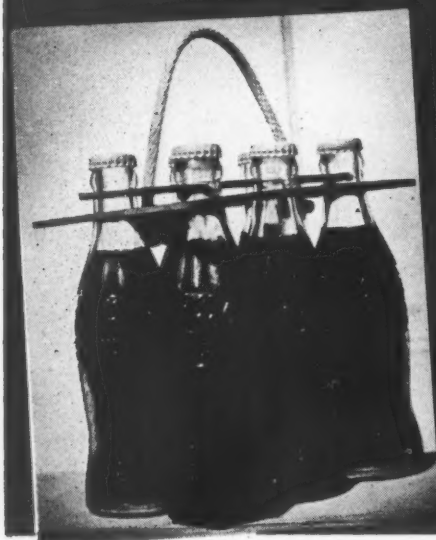
**2** Unrestricted gray stock is being substituted for a limited quantity of Kellogg's cereals to save pulp and thereby aid the war effort. The company feels that the most important problem the temporary change has presented is the possible bad consumer reaction. Hence, each gray box carries this message: "This carton a wartime substitute for the regular, sparkling white Kellogg box. But the contents are the same delicious, oven-crisp cereals that you have always enjoyed." Naturally, Kellogg will return to the white carton as soon as feasible.

**3** The wide expanse of empty space on a corrugated shipping case has often been suggested as the natural place for descriptive advertising of the product within. Albert Ehlers, Inc., is one firm which is using this space to advantage on its shipping case for 50 one-lb. packages of Converted Rice. The new design theme adopted follows closely the Ehlers trademark used on other products and on its trucks, display pieces and advertisements. Case and carton, Robert Gair Co., Inc., New York.



**4** Non-critical fibreboard scrap material is used in making this two-part simplified bottle carrier. Holes in the lower board fit over the bottles which are held in place by slots in the upper piece. A sash-cord handle completes the unit which, because of its sturdy construction, can make innumerable trips to the retailer before it must be discarded. Carrier, The Travelodge Corp., Lynchburg, Va.

**5** French Mix—all the dry ingredients necessary to make a french dressing are packed in a 1-oz. cellophane envelope, crimp sealed at the bottom and folded over and heat sealed at the top. The cellophane envelope is then slipped into an outer white kraft envelope which is printed in green. Four packets are packaged in a set-up box to make a selling unit. R. W. Knapp, manufacturer of the product, claims that it is now being distributed widely through the mail and even greater distribution is expected after the war.





# G PAGE ANT

**6** Belts of frankfurters are coming out of Oscar Mayer & Co.'s Chicago plant. Known as "Kartridge Pak," this new method (patent pending) of branding sausage products was developed by Mayer for its Yellow Brand wieners to replace the method generally used—that of banding one or two frankfurters in each pound. The banding machine, perfected by the company's engineers, feeds a strip of banding from the top and another from the bottom. The strips are heat sealed between each frankfurter to form a belt-like strip. Perforations between each wiener make separation easy. Two flat strips of the banded wieners can be laid in each of the tray-like package tops.

**7** Mil-Du-Rid, a new household product intended to kill mildew and prevent its re-occurrence, is being packaged in a glass bottle with a metal closure by Interchemical Corp., New York. Six of the bottles with descriptive labels are supplied to retailers in a display shipping carton which is designed to act as a self-selling counter unit. This type of display package has been found to be particularly advantageous in self-service stores. Bottle and closure, Anchor Hocking Glass Corp., Lancaster, Ohio. Label, Wayside Press, Paterson, N. J. Printing of carton, A. L. Reid Printing Corp., New York.

**8** Air Treatment Corp. of America has bottled its "Breeze," an air deodorant, in a tall, graceful clear-glass bottle with a metal closure. The label follows the contours of the bottle and is printed in predominantly red and blue with touches of black and white. The trade name is reverse printed in white on a blue band while the arrow which carries the eye to the name is black. There has been no attempt made to hide the wick which must be pulled out when using the deodorant. Label design, E. Leonard Koppel, New York. Bottle & closure, Owens-Illinois Glass Co., Toledo, Ohio. Label printing, Sun Press Inc., New York.

**9** A little over a year ago Lock's Laboratories redesigned two of their foot preparation packages. Sales jumped—so, now the entire Lock's line is in new packages with the exception of the soap. In fact, the new labels have been even further improved. The name has been displayed more prominently in red; the illustration of the foot has been made to stand out more clearly; the directions have been improved and made more legible, and the whole label has been varnished so that it will stay clean longer. Since this redesign the company claims that self-service sales in one of New York's largest department stores have increased 20%. At the present time the powder is in a fibre can but Lock claims that after the war they intend to adopt a lithographed tin can for this product. Labels, Rode & Brand, New York. Fibre cans, Cordiano Can Co., Inc., Brooklyn, N. Y.







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1—New square milk bottles allow 20 to 50% more milk to be stored in the average home refrigerator depending upon size and shape of compartment. 2—Family of square bottles includes quarts, pints and half-pints.

## Square milk bottles

A step toward greater consumer convenience in postwar package design is indicated by the square milk bottle adopted during the past year by the Sanitary Farm Dairies operated by Ed Reidel in Cedar Rapids, Iowa.

The change was made in response to popular demand by housewives and grocers for a milk bottle that would save more space in refrigerators. Another big advantage is the replacement of cumbersome old-style delivery cases with new ones that are one-third smaller by dimensions and 20% lighter in weight.

Far-reaching implications are entailed in the development of this square bottle. Home refrigerator manufacturers, who are looking forward to record production in the immediate years after the peace, have already expressed a willingness to design their new models to assure maximum efficiency in storing the square bottle. Store refrigeration case manufacturers and truck makers likewise have expressed a desire to design postwar products that will utilize all the advantages of the square bottle and new cases.

The Cedar Rapids operation was begun in July 1943, when Mr. Reidel, operator of other plants in Clinton, Iowa, St. Paul, Minn., and Houston, Tex., called upon his glass supplier for a square milk bottle. The first order included but a small fraction of the total number of bottles required for the Cedar Rapids plant. In January of this year, the dairy converted 100% to the square bottle. During the conversion period, numerous improvements were made in the design of the square bottle. The new space-saving cases were delivered to the plant in April.

By the use of the square bottle and the new cases, Mr. Reidel says the capacity of his cold room has jumped 45%. He is able to load the same amount of milk on his wholesale and retail trucks in 33 $\frac{1}{3}$ % less space, giving drivers more room in which to do their work and thereby speeding up their deliveries.

Housewives have reported they can store the same amount of milk in 20 to 50% less space by using the square bottle, or

"handi-square" as the new bottle has been named, instead of the rounds. Grocers stated they can put 36 square bottles on a refrigerator shelf which formerly held only 25 of the conventional round bottles.

While the plant was being converted from round to square bottles, bottling was continued in the two different bottles with only minor adjustments to equipment.

Because the bottom construction of the square bottle is similar to that of the round, the squares traveled the standard bottle conveyors to the filling and capping machines very satisfactorily, after a minor adjustment in the space between the guide rails. The square bottles, it is said, do not rotate against each other when conveyor lines clog. Thus, the sterilized bottles keep their sparkling new appearance for a longer period of time.

To accommodate the square bottle a redesigned metal star-wheel having the same contour as the square bottle was substituted for the old rubber one to center the bottles under the filler and pass them on to the capper. The bottle was found to handle well in the Cedar Rapids casing operation.

Because of the rounded shoulders of the square and the fact that the diagonal measurement of the square quart is the same as the diameter of the round bottle, the Cedar Rapids plant had no difficulties in the washing operation. The square bottle was designed so that it could be used in the majority of dairy plant bottle-handling equipment—such as washer, fillers and cappers—with a minimum of change. Shortly after the installation was completed, dairy equipment makers were furnished with samples of the square bottles to determine how this bottle could be handled on their equipment.

The new cases are approximately 12 by 15 in. in size. They are designed to hold 12 quarts, 20 pints or 24 half-pints, and the three different cases can be stacked interchangeably. Sanitary Farm employees placed the new cases sideways on the conveyors instead of end-to-end as the old cases had been handled.



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Customer acceptance of the bottle was good from the start. It was introduced on wholesale and retail routes covering, in addition to a number of grocery stores, the better residential section of the city and a smattering of middle class homes. Many housewives on the route, because of the wartime restrictions limiting deliveries to every other day, were buying from six to ten quarts of milk at every delivery.

The most frequent comment was that the bottle "pours like a pitcher" and that "it is easier to handle." Others said the bottle didn't drip milk and still others commented that they liked the new bottle because it would not roll. The reason for the non-drip feature is the special finish now commonly used on other types of milk bottles.

The square family of bottles retains the advantages of the light weight and short height of the latest-style round bottles. The square quart weights  $17\frac{3}{4}$  oz., identical to the present modern round bottles, as compared with the 22-oz. quart bottle used before 1940. Secondly, it is nearly one inch shorter than the old-fashioned, cumbersome, "straight neck" round style.

Forerunner of the "handi-square" bottle was the oblong, half-gallon milk bottle used in the New York metropolitan area introduced by Borden Farm Products and Sheffield Farms some time ago.

The square bottle, having flat sides, lends itself well to the application of color lettering and design. The Cedar Rapids bottles were decorated with red applied color lettering showing the dairy's name and "Mello-D" brand name.

Credit: Square bottles, Owens-Illinois Glass Co., Toledo, Ohio. Cases, Creamery Package Mfg. Co., Chicago.

3—Left, straight-neck heavier round quart bottle which weighs 22 oz.; center, new short round bottle weighing  $17\frac{3}{4}$  oz.; right, "handi-square," weighing same as short round. 4—Squares require a minimum change of equipment. Metal star wheel used to center bottle beneath capper has same contour as the square bottle. Similar wheel in background moves sterilized empties from conveyor to filler. 5—Newly designed, smaller handling cases are 3 in. shorter, fit sideways on conveyor. 6—Comparing old with new. Left, straight-neck, round bottle; right, lighter, shorter square bottle. 7—Prewar refrigerator holds 77 round bottles or 104 squares. New cases will be designed to get maximum efficiency from squares.



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# Home-use re-closures to save foods

Paperboard and cellophane are precious materials these days, but if they can help to avoid waste of still more precious foods, their judicious use for that purpose is highly commendable. This principle is being applied in the manufacture and distribution of FasTop re-closures for covering partly empty containers that go back into the refrigerator for the later final consumption of their contents.

A packet of these re-closures sells at a nominal price, making it possible to merchandise the product through many different types of outlets, such as grocery, delicatessen, novelty, drug and hardware stores.

The package itself—to be described in a moment—is of simple construction, easy to handle and convenient for keeping the unused contents in clean condition. To re-close a partly emptied container, the housewife places a sheet of cellophane over the top, then presses a FasTop cap gently and firmly down over it. The cap is a truncated cone open at both ends, and the paperboard has enough “give” to form a seal of sufficient strength not only to hold the cellophane firmly in place, but to enable the container to be turned upside down without losing its contents. Of course, that isn’t the way the housewife will wittingly use it, any more than typewriters are used by dropping them out of windows or filing cabinets are used to hold a man standing on them—but those dramatic tests do prove something about the product.

In this case, it is claimed, a seal is formed which, for all practical purposes, is leakproof, airtight and sanitary. The claim is even made that carbonated beverages can be re-capped with FasTops, but it is also suggested that the re-capped bottle be kept in a cool place.

The retailer’s unit is a display container holding 24 consumer units. Each of these consumer units is a packet which holds 40 square sheets of cellophane and six of the FasTop collars of three different sizes. All told there are six sizes of the collars but the consumer units are packed so that the housewife may designate either a packet of the three larger sizes or one of the three smaller sizes. The same colors—red and blue—are used for both packets, but the design interchanges them for easy identity; that is, a packet printed with blue as the predominant color and red as the trim color holds the smaller sizes, while the reverse is true for the larger sizes. Packet and collars are both made of .016-gage coated paperboard, the surface of which is varnished after printing to resist damage from moisture and handling.

The collars are printed in “gangs,” three of them forming a cone which can be pressed out flat so that two of them can be placed in the packet. The desired size is detached by tearing off along a perforated line. These caps are blind-scored so that when opened out and pressed on to the jar or tumbler opening they assume a conical shape. The scoring is across the grain of the paperboard which accounts for the “give” that makes the cap cling to the cellophane-covered container.

The packet which comprises the consumer unit is really a paperboard envelope with a single glue joint. One of the flaps folds in to make the protecting cover for the cellophane sheets. A portion of this is removable by tearing a perforation. This makes it possible for the user to take out a piece of cellophane without touching the surface that is to go next to the contents, thus reducing the danger of contamination. Another flap forms the compartment into which the truncated cones fit, two of them—6 collars—making up the quota for the unit.

1—Sizes of re-closure collars are carefully calculated to accommodate a wide variety of container sizes.





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2—Consumer's unit package contains squares of cellophane and three sizes of collars. The latter folds flat for convenient packaging.



The FasTop collars can be used either over the container opening or inverted inside. The angle of the cone is important for two reasons: First, it is responsible for the cling of the cap to the cellophane-covered container. Second, it gives the variety of sizes necessary to provide re-closures for the commonest types of glass containers. The sizes were determined after careful studies made by the FasTop manufacturers. The smaller three fit the standard beverage bottle, the 250 cc. to 1,000 cc. chemical flasks and, when inverted, will serve for such containers as the standard cream bottle and the Hygeia nursing bottle. The larger three are intended for the standard quart milk bottle, the small tumbler in which cheese spreads are packed and also fit the standard glass baby food jar, the No. 1 standard glass jar, the mason jar and the ordinary tumbler of 6, 8 or 10 oz. capacity.

It is expected that the largest volume of sale will be for

household use, although other uses suggest themselves. For instance, chemical laboratories can make use of an inexpensive disposable re-closure for flasks in experiments that do not have to be hermetically sealed. Hospitals can use closures of this nature to avoid the possibility of contamination incidental to the preparation of various foods in quantities. As is well known, the hospital prepares many servings at one time, to be kept under refrigeration until required for use. This disposable closure, already in use in some institutions, provides an inexpensive and convenient solution for this problem. Likewise, it is expected hotels and restaurants will find in it a means of avoiding waste.

*Credits: Packets, display containers and paperboard re-closures, The Robert Gair Co., New York City. Cellophane sheets, Sylvania Industrial Corp., New York.*

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3—Interchange of colors makes for economical production, easy identity. Left: Display container is red, unit packet of three smaller sizes is blue. Right: Display container is blue, unit packet of larger sizes is red.





1—Typical arrangement for applying supermarket technique to the music department, showing arrangement of albums and single records in new self-selection fixtures placed in strategic selling locations.

## Self-selection for phonograph records

When RCA Victor went to dealers with the idea of self-service for phonograph records, many merchants shook their heads. "All right for groceries," they said, "but won't work for records."

RCA listened to these opinions, but did not think they were backed up with facts. After two years of tests, RCA Victor Division of Radio Corp. of America has put into the hands of dealers a complete system of self-selection for single records and albums.

How this program was worked out for packaged records and albums is another excellent example of the broad scope for self-service beyond the food field.

The plan is backed by research proving to a specially set up sales department that: sales volume is increased by self-selection; shop wear, theft and breakage are normal; sales personnel can handle approximately three times the volume that it handled in a conventional department, thereby cutting selling costs; 90% of the volume in test stores is done on a cash basis, sales production per square foot is maintained at a high level even in a substantially larger area than the conventional record department; dollar sales of classical single records, ordinarily small in comparison with classical albums, are brought up close to the volume secured from classical albums; customers like to buy records the self-selection way and asked for its continuance.

This idea for record selling began in Camden two years ago when it was recognized that self selection in food stores had doubled sales per customer in some cases, while by contrast

customers were coming out of ordinary record stores with less merchandise than they went in intending to buy.

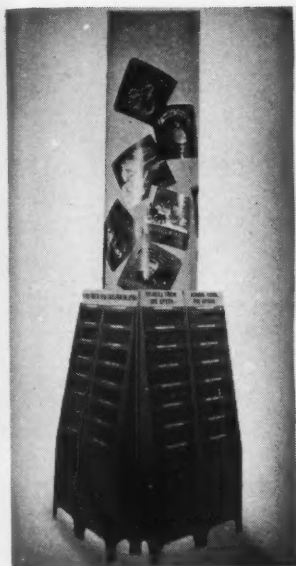
With those points in mind RCA contacted various merchants, saw mass displays of books, china and merchandise other than records sold through self-selection. Then they talked to record merchants. Some dealers, however, indicated that in their opinion records should not be sold through self-service because theft and breakage would be too high, the clerk was too important a factor in the sale, the space required would be too great and other obstacles RCA didn't feel could be reconciled with other progressive retailing experience.

Therefore after listening to these opinions, the company decided to lay out a complete self-selection store. Fixture design, layout, equipment, grouping of records and albums and all problems which could be worked out in theory were tried out tentatively in a model layout.

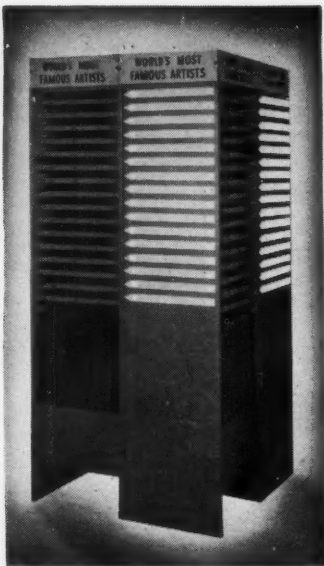
They started out with 8,000 sq. ft. of space, but found this to be ridiculously large and almost immediately cut it to 4,000 ft. Progressive dealers and distributors were invited to look over the model layout and their reactions were encouraging. Instead of scoffing, many said the idea looked good to them, and one store operator was induced to give it a trial.

Through arrangements with Samuel Hypes, 2,000 sq. ft. of space in the annex of Weibold's Northtown store in Camden were assigned for the trial. The test department displayed only Victor albums and classical single records, while





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2—Slant-type, single-record rack, a partition or column fixture. 3—Vertical-type, single-record fixture may be used separately or grouped. 4—Same type of fixtures in a different arrangement. 5—Album rack provides good display for album cover, has storage place below. 6—Fixture for single-record best sellers.

the store's conventional record department continued to operate in the normal manner.

RCA's outline for the plan stated that "sales of the self-selection department surpassed the volume of the conventional operation, and the store management was enthusiastic and wished to continue the tests and experimentation. After five weeks of operation, however, it was decided that self-selection and the conventional departments should be consolidated. Therefore the test was discontinued in order to make the necessary changes and to analyze the problems encountered during the five weeks of operating experience."

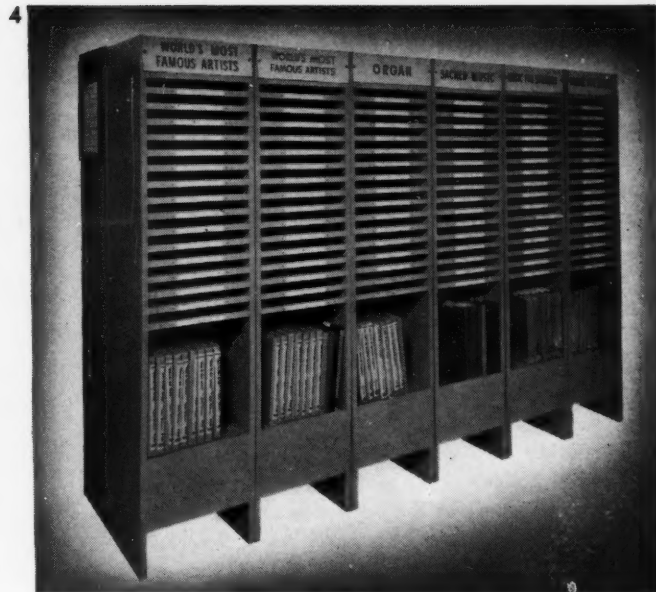
Weibold's offered a reasonable amount of space and let the company set up any type of department they wanted without obligation. The first practical test answered the most fundamental questions of all that might be asked about self-selection—that the public liked it, was practically unanimous in its approval and kept asking for it continually when the first test was discontinued.

The original tests also showed up the "bugs" in the program. Analysis indicated the need for improved fixtures for the albums and single records; for better methods of pricing and stock control; for better classification of single records and albums for customer convenience, and for improved methods of mass display and promotions. These were the problems worked out in the second operating test.

Four months after the initial test was discontinued the doors opened to the first complete self-selection record department. It contained 1800 sq. ft. of floor space, approximately double the size of the conventional record department formerly operated in the same store. Sales volume, the company stated, increased 61%.

During the next eight months, the self-service department operating procedures and physical facilities were under constant study and revision, and were improved to a point where a basic operating pattern could be outlined for presentation to dealers.

This pattern, published in complete booklet form with il-



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illustrations, contains full detail about fixtures and equipment, costs, store arrangement, grouping of stock and classification headings, control of inventory by dealer, personnel, advertising and promotion.

Three types of racks were recommended for single records. A slant type rack displays the records in a vertical position, with about one-third of the record envelope visible. It can be constructed with record slots on one side only for partition or column display (Fig. 2) or on both sides, for floor display. Each slot conveniently holds three records and each shelf is tilted one-half inch to the rear. This eliminates the possibility of the records falling out due to consumer handling. Each slot is made to hold 12-in. records. Removable wood blocks may be placed in the slots if 10-in. records are displayed.

The other two single record racks display records in a horizontal position, each slot holding six records (Fig. 3). A large storage space at the bottom is for reserve stock. These racks can be used for either partition or floor space, grouped together when desired.

The multiple vertical type rack is similar in construction to the single vertical type (Fig. 4), but offers better indexing possibilities than the single one. This type of rack can be used only in floor or "area" space.

There are recommended also three types of racks for album display; one for floor or "area" space, one for use against a wall or partition and one for use in corners. The floor and partition racks follow a single design and have a pyramid appearance with the lowest shelves possessing greater depth though the back is vertical. The bottom shelf does not lend itself to display or sales, but is for reserve stock in three compartments. Display shelves are provided with four cleats for displaying 12-in. records or six cleats for 10-in. records. Shelves are slanted to prevent albums from falling out through careless handling (Fig. 5).

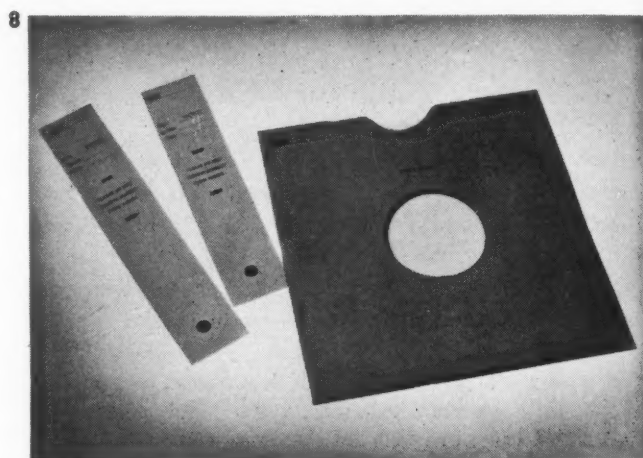
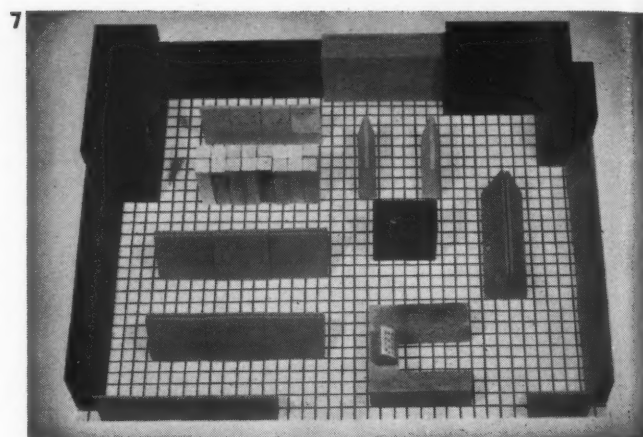
The corner rack is designed to finish off any corner in a department and can be used to display various albums or accessories.

Every album and single record fixture in a department should be assigned a number, shown on the rack. These numbers are used on the album markers and green stock covers which are an essential part of the inventory control system.

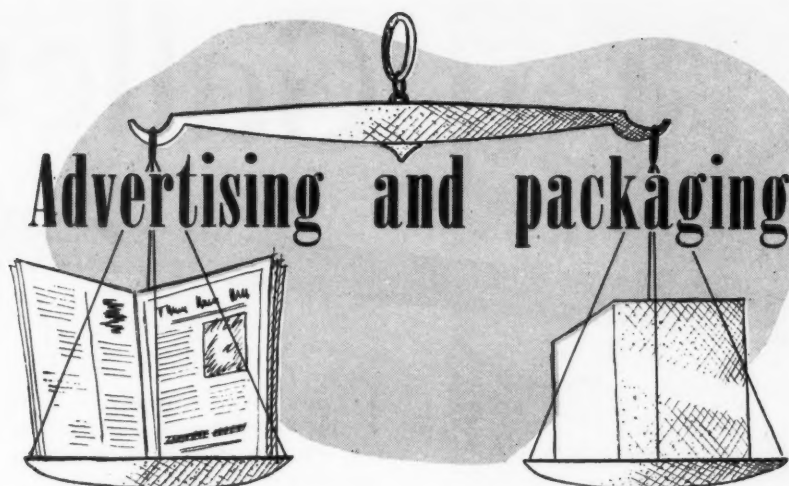
Conventional wall racks, the company planned so that they could be equipped for self-selection selling with slight modification for the display and sale of single records, for slower moving merchandise, or for storage space.

The majority of popular record sales are concentrated in the 30 best sellers, according to surveys, and 10 selections account for 30% to 40% of the total popular demand. Tests have proved that a floor fixture similar to Fig. 6 is an efficient method of merchandising the current hit tunes, especially during peak periods, as it requires little sales attention. This fixture accommodates a box of 25 records in each of the 30 compartments, while the lower part will store approximately 1,000 records of reserve stock.

Three out of four customers play records before purchasing them. This means that adequate (Continued on page 150)



7—Floor plan layouts like this, with miniature models, are recommended when planning a department. 8—Stock control is facilitated by stock envelopes and album markers. 9 and 10—Sales are increased by point-of-sale tie-ins with local musical events, seasonal ideas, etc.



## Should they have a single legal standard?

by Hugo Mock\*

The trademark, or literally the mark in trade, is of great antiquity, made prominent in the middle ages by the activities of the guilds. A typical instance is the marking of gold and silver articles long regulated by statute, bearing not only a national mark indicating the fineness of the silver or gold, but also a maker's mark which was the signature of the individual craftsman producing the article.

In contrast to this, the merchandising of commodities in commerce, especially the advertising thereof, was long left to the untrammelled exercise of the doctrine of *caveat emptor*: "let the buyer beware," which was held to be, in some fashion, an expression of the rugged individualism of British commerce.

This distinction between the marking of an article itself and the advertising thereof left a marked impression in our legislation affecting commerce so that in the original Food and Drug Act of 1906, the labeling of all food and drug articles was under the jurisdiction of the Food and Drug Administration, but its advertising was left uncontrolled. Until the Shirley Amendment to the original Food and Drug Act was passed, you had the strange situation that a maker of medicine, for instance, could advertise it freely as a cure for rheumatism, but on the label he was permitted to say "only intended as a relief to rheumatic pains."

Further differences between the labeling and packaging of an article and the advertising thereof are even now expressed in the division of authority between the Federal Trade Commission which, under the Wheeler-Lea Amendment, has jurisdiction over the advertising of Foods, Drugs and Cosmetics, whereas the Federal Food, Drug and Cosmetic Act of 1938 gives the Food and Drug Administration jurisdiction over the labeling of such articles.

This is a somewhat strange situation involving diverse legislation regarding advertising and regarding labeling or packaging, with the obvious result that limitations which are effective in the labeling or packaging of articles have not, until recently, been applied to advertising. It would appear to the average consumer at least that truth should be as obligatory in advertising as in labeling or packaging, and it is believed that the trend of modern merchandising and of modern legislation affecting merchandising is to enforce the

same standards on advertising as is required in labeling.

A rather recent amendment to the Federal Trade Commission Act which formerly was limited to unfair *competitive* methods in commerce, now says "Unfair or deceptive acts or practices in commerce are unlawful regardless of whether such acts are competitive or not," and this phrase "Unfair or deceptive acts or practices" is broad enough to cover almost any form of misrepresentation. In theory, the distinction appeared to be that advertising was merely a form of trade puffery whereas labeling was a statement of fact, but there is always a tendency for the law to catch up with abuses so here also it will be found that the same truth which has been so long required in packaging will be required in advertising.

How does this affect, in practice, modern packaging? It would seem that both advertising and packaging will have to drop more and more the realm of suggestive fantasy which is intended actually to be deceptive, to stick more and more to facts and gain consumer influence by the merit of the article and the artistry of the package rather than by subtle inferences which are intended to leave a false impression.

We have a recent example in the Wool Labeling Act which requires a truthful statement of percentages of wool in textile articles, with the qualification as to the quality of the wool used. The courts are looking more and more unfavorably on advertisements that characterize containers of cottonseed oil with pictures of Vesuvius or Italian rustic scenes, or "Monastery Brand" or the like, often intended to leave a suggestion of genuine olive oil, and pictures of lambs at play will become less popular in the labeling of cotton goods.

It is a feature of the Federal Food, Drug & Cosmetic Act of 1938 that foods, drugs or cosmetics may be misbranded merely by naming them after a single ingredient even though the names of all the ingredients appear elsewhere on the label.

That advertising in the future shall conform to the same regulations as apply to packaging is all to the advantage of packaged articles because where the same standards control both advertising and packaging, the packaging will become a relatively more important item than in the situation where the comparative license of advertising is permitted to dominate the selling of the article.

\* Legal Adviser, the Toilet Goods Association, Inc.



# Display Gallery



**1** With butter on the ration list, Welch's Grapelade is being merchandised by means of window posters and counter cards as a satisfactory spread for bread, toast, waffles, pancakes, muffins, biscuits or what have you. The four-color window poster shown here can be used indoors as part of a mass display tying up bread and the spread, or in a hot-weather foods window. The circle in the lower left-hand corner is sufficiently large to attract attention to the price of the jar. Display, Erie Dispatch Printing & Engraving Co., Erie, Pa.

**2** An interesting case of both paper and merchandise conservation is illustrated in these two leg make-up displays put out by Hudnut Sales Co., Inc. The elaborate five-bottle one was put out last year when display material was not yet so critical. This old display took a corrugated shipping folder 13 by 14 1/2 by 3/4 in. in contrast to the new small display which can be mailed in a 6 by 9 in. manila envelope. The smaller counter piece, in addition, is made of lightweight chipboard, ties up only one bottle of merchandise at a time and will fit into almost any available counter space. Display, Harlea Press, New York City.

**3** Glass, plastic, metal and wood are combined in this unusual display case for all of the shades of Yardley's face powder, lipstick and cream rouge. The top center platform revolves and the lipsticks are hung downward so that their colors reflect in the circular panel of mirrored glass underneath. The other two circular platforms on either side are adjustable so that they can move in or out according to the space available on the counter. The maple base has a protective glass panel for the rouge and powder samples. The glass panel across the top is held up by two wooden supports and has the name Yardley etched into it. Display, General Display Case Co., New York City.





4 This easily erected counter display designed to sell hot weather needs along with Sperti Bio-Dyne Ointment has two shelves of paperboard each 2 in. deep and 11 in. wide under the colorful paper awning. The shelves can accommodate six or more items along with the irremovable Bio-Dyne tube shown on the bottom shelf. The whole stand is 12 in. high—just right for an important counter spot. The front panel points out the value of the ointment as the new treatment for sunburn. Display, Zippodt, Inc., Chicago, Ill.

5 National Biscuit Co., in order to take advantage of "impulse" buying, has designed bottle-top cards for beverage bottles which suggest pretzels with cooling drinks. These cards, which are provided with a scored tab which can be slipped over the neck of a bottle, are planned to encourage tie-in displays. The company feels that pretzels are an impulse item and should be displayed in the beverage department of the self-service stores for added profit from extra sales. All three types of Nabisco pretzels, alphabet, sticks and three-ring pretzels, are pictured on the card while small price cards for each are provided to fasten on any flat surface near the display.

6 One of the few motion displays to be seen in windows today is this impressive cut-out for Marlin Blades by the Marlin Firearms Co. The portion just above the large hand holding a package of the blades moves slowly back and forth and reads "25¢ shaves you for three months." The side pieces also stress the economy of these blades and, in addition, merchandise Marlin Brushless or Lather shaving cream as the perfect partner for the blades. The centerpiece is all in one but can be used for a large or small space with the addition or subtraction of side pieces Display, Einson-Freeman Co., Inc., Long Island City, N. Y.

7 "Come back soon old smoothie!" is the Burma-Shave Co.'s way of advertising Burma-Shave by using the military theme. The six-color, easel-mounted cutout of the soldier and his girl is flanked by a giant tube and jar of this product which has become famous through the use of amusing road signs. The display illustrated is simple—using only the centerpiece and one smaller sign down front which gives prices for the two sizes. Naturally the retailer can enlarge upon the display by adding as many groupings of the product as he desires to fill available space. Displays of this sort are obviously meant to do double duty for interiors as well, after they have served their purpose in the show window. Display, Ketterlinus Lithographic Manufacturing Co., Philadelphia, Pa.



6





1—For instant product recognition, all Chic advertising material is printed in same color as the packages.

## Permanent wave kits

A home-made permanent wave can be administered when you want it without the bother of a beauty parlor appointment—and it costs but a fraction of a job done by a professional hairdresser.

These two sound reasons have been the basis for the growth of a business in packaged permanent wave kits—practically non-existent two years ago—that is now estimated at 5,000,000 sets a year.

The Twin Cities, St. Paul and Minneapolis, have become the center for this thriving new industry. First to capture a market in this field was Charm-Kurl Co., St. Paul, which started with mail order promotion about two years ago. The Mollin Co. of the same city went a step further and put out a kit for distribution in department and syndicate stores. Another leader that has gained national distribution is Chic, put out by the Linhall Co.

A newcomer which set out in March this year to grab a slice of this growing market is Rolwav which is being offered at 25 cents for a complete kit.

To keep the kits in a popular low-price range, packaging has been kept simple in all cases. Folding cartons have been adopted as standard for the outside container, usually printed in one-color reverse printing. Sizes of the cartons were selected for convenience in mass display. Art treatment is simple and modern with trade name presented prominently. Designs usually carry a woman's head crowned with a shock of flowing wavy locks.

Inside the packages the various items used for the permanent wave—shampoo, curling solution, rinse, wave set, etc.—all in powder form—are put into small envelopes—each carefully and meticulously labeled as to what each is used for.

In addition, the kits contain permanent wave curlers and tissues banded together. This ensemble is accompanied by an instruction booklet describing exactly how each item is to be used in administering a home permanent wave.

Rolvay Co., it is said, has been able to cut its cost per item by adapting automatic machinery in packaging the entire kit. How the automatic line is set up, however, the company does not wish to reveal at this time. Rolwav at first had planned to use envelopes instead of cartons, but later a supply of cartons was assured.

Unlike the more expensive sets which sell around 59 cents, Rolwav in its 25-cent kit does not include shampoo. The company reasoned that women would just as soon use their preferred shampoo in combination with other materials. The Rolwav cartons are also a somewhat different shape from the square boxes of competitors, being a long and narrow type box designed to fit into a convenient counter unit that can be used as a display container for distribution in department stores, drug outlets and national and independent limited price variety stores.

Producers of these permanent wave kits have been able to obtain adequate packaging supplies to date sufficient to care for their production which is held down to some extent by shortages of essential chemicals going into the products.

Leading companies have undertaken extensive magazine advertising programs for the promotion of their products. The amount of these budgets gives a fairly good idea of the growth of this new packaged business. Charm-Kurl is expected to spend upwards of \$500,000 this year, according to *Advertising Age*. Mollin may spend between \$100,000 and \$200,000. Rolwav introduced its consumer advertising in

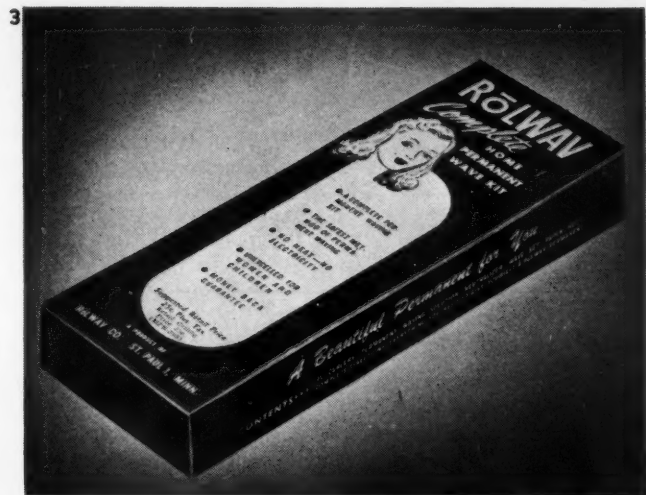
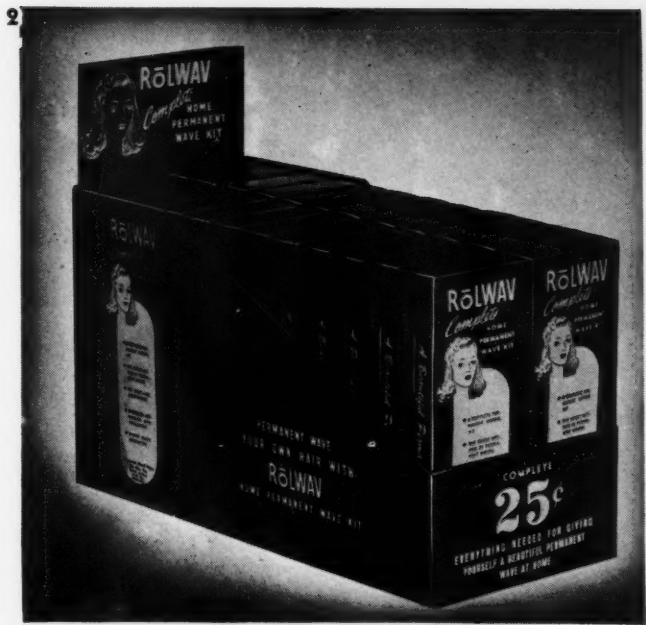


national magazines in April presenting its 25-cent kit in competition with the 59-cent products already on the market. Another permanent wave kit that has gained substantial national distribution is Movie Wave.

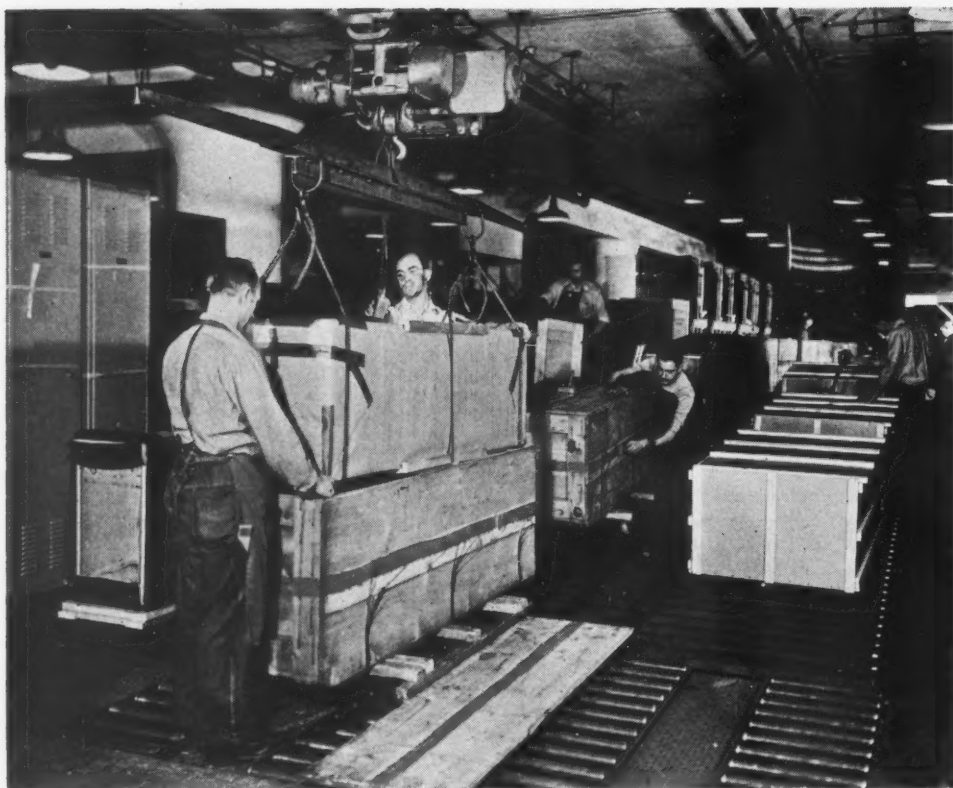
Chic has introduced an interesting tie-up between its package and advertising, calling for a special color on its magazine pages that matches the color of the actual package. This they feel, has helped to secure instant recognition of the package on store counters.

Makers of the home kits say they are not intended to replace permanent waves given in beauty parlors, but are a wartime boon. Women are not only interested in the economy appeal, but the convenience of administering a permanent wave in their homes without the trouble of an appointment. Research figures compiled through a consumer panel of one of the leading popular magazines recently showed that 16.7% of the women who answered a questionnaire said they had given themselves a permanent wave with a home permanent wave kit. This appears to be a considerable percentage for a product which has been in the field for only two years. The future of the kits as a packaged item and a new source of use for packaged materials in the postwar era, when the country returns to a seller's market, will depend entirely upon how favorably received the home permanent wave is among American women and their preference for it over the beauty-parlor administration.

2—Counter unit for Rolwav. 3—Close-up of this new 25-cent kit introduced this spring to grab a slice of fast-growing market. Automatic packaging is helping to reduce production costs. 4—Example of counter displays used by Rolwav. 5—Mollin's package illustrates folding carton adopted as convenient economical container.







*At the merchandising division of Western Electric's Kearny works, terminal equipment for teletypewriter is packaged for shipment to battlefronts all over the world.*

## Radio and wire communications for invasion

One of the many "unsung jobs" vital to the success of the Western European invasion has been the fabricating of boxes, packaging and waterproofing of electronic, radio and wire communication equipment so that this communications apparatus will reach the beachheads in a condition for instantaneous and perfect use. This is one of the responsibilities of the Signal Corps in maintaining communications—the life-line of attack.

Of all the supply services of the Army, the Signal Corps deals to the greatest extent in delicate, fragile apparatus—telephone switchboards, radios, panel boards, teletypewriter machines, radio tubes and batteries. These are instruments that have to be "handled with care." Breakage is not the only factor to be guarded against. Sometimes the slightest jar will be enough to throw off a piece of delicate apparatus so that it is useless for the battle operations purposes; corroding of a wire will cause a "shorting."

To overcome these problems, the Signal Corps evolved new packaging methods and improved existing packaging processes. For instance, radio tubes are shockproofed in packing. A slatted packing case is made for the giant radio tubes with webbed bindings on each of the inside corners to secure the tubes in place and around the middle of the tube so that the latter is suspended in the center of the crate. For smaller tubes a similar method is used employing cardboard collars to keep the tubes upright and suspended.

Because teletypewriter machines can be very easily cracked and also have thousands of parts that can be thrown out of order by rough handling, the Signal Corps mounts them on sponge rubber. For dry batteries, experiments were conducted at the Philadelphia Signal Depot to develop a packaging method which would insure resistance to the roughest

handling, immersion and all extremes of climatic or atmospheric conditions.

Because many of the batteries landed at Guadalcanal were found to be dead, the Signal Corps no longer takes any chances with the elements, but packs the batteries in unit packages which are wrapped in a protective sealed bag offering protection against water submersion, moisture-vapor and extreme humidity conditions. The standard cartons into which the unit packages are placed are also lined with a waterproof lining. Bags and liners are made from any of the Army-Navy approved materials for this purpose. Each protective bag is heat sealed to close up all the seams. Other types of apparatus such as glass and porcelain insulators are shockproofed by using a large amount of cushioning material.

The famous SCR-299, the Signal Corps mobile radio set, is a good example of how a large piece of equipment is made moisture proof. First, the various components of this set, which is housed in a large truck and trailer, are wrapped in moistureproof paper. Inside the truck, a desiccant is hung to dry up the vapor in the interior. Finally all cracks and openings are sealed up with asphalt glue and pitch to prevent the entrance of moisture and dust.

Signal equipment that has large metal surfaces that must be protected against deterioration are coated with a corrosion preventat'ive. These in turn are wrapped in grease-proof paper to keep the coating on and the dust out. Many of the smaller units of equipment are individually enclosed within moistureproof barriers containing a dehydrating agent. When they are combined in a large packing case, the larger container also has a waterproof lining of asphalt laminated kraft and foil to make doubly sure that no moisture can reach the instruments within.

# IS SHE BLUSHING OR IS IT ROUGE?



The bride of the '90s was a demure creature heavily swathed in textiles, complete with corset and bustle. The dainty blush which tinged her cheeks may have owed something to cosmetics, but if so, it was a deep dark secret kept even from her husband.

Cosmetics were just plain naughty and although women used them, they did so in the privacy of their boudoirs.

Today's modest maiden powders her nose practically any time and place, and feels no shame in the process. Cosmetics, mass packaged for the millions, have become so important a part of daily living that even with government restrictions few people would do without them.

F. N. BURT containers have played a large part in winning big markets. We make quantities—millions—of small, round, oval and square set-up boxes for the large packagers of drugs and cosmetics. BURT containers have a quality appearance and a quantity price—a combination that has won a place in the merchandising of the leading preparations.

We will be glad to consult with you now, on your requirements.

**F. N. BURT COMPANY, INC.**  
500-540 SENECA STREET, BUFFALO, N.Y.

New York City - Kansas City - St. Louis - Atlanta - Chicago - Los Angeles - Boston - Cleveland  
Cincinnati - Memphis - New Orleans - Minneapolis  
SAN FRANCISCO: 220 Bush Street, Yukon 0367  
NEWARK, N. J.: 915 Military Park Bldg. Telephone Market 3-0788

CANADIAN DIVISION:  
Dominion Paper Box Company, Ltd., 468-483 King Street, West, Toronto 2, Canada

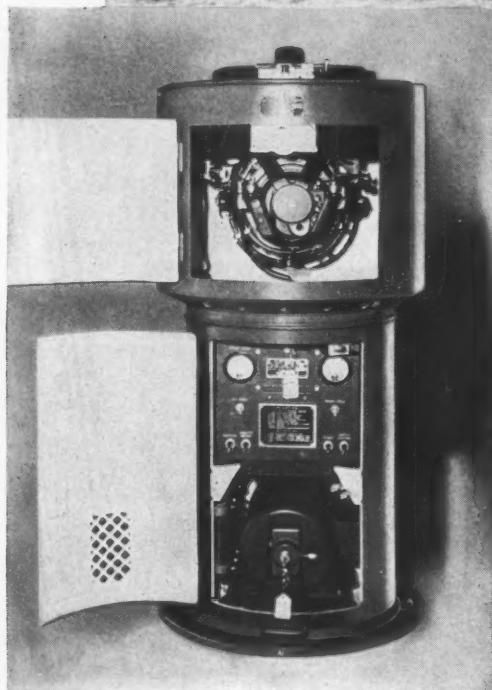
# A SECRET WEAPON

that plays a vital role in

## INVASION LANDINGS



*Many of the landing craft in the Normandy invasion were equipped with the new lightweight Gyrocompass made by Package Machinery Co.*



**S**PLIT-SECOND invasion time-tables call for unfailing accuracy in beachhead landings by our invasion craft . . . The secret weapon that makes this possible has recently been revealed by the U. S. Navy . . . It's a new lightweight gyrocompass only 19 inches in diameter, made by the Sperry Gyroscope Company and the Package Machinery Company.

Foreseeing the need for such an instrument, Naval authorities drew up specifications for it back in 1940. In record time, Sperry engineers produced a successful model — the Mark XVIII.

Non-magnetic and unaffected by electrical machinery, this compass *points true north*. It is a marvel of compactness, everything being contained in the binnacle except the voltage regulator and repeaters. And it has the traditional sturdiness of everything pertaining to the Navy.

Today hundreds of Mark XVIII compasses built by us are in service, and we have many more in production. We of the Package Machinery Company take deep satisfaction in being able to carry on this important work, as well as the building of various types of armament machinery and packaging machinery now serving many branches of our combat forces.



PACKAGE MACHINERY COMPANY  
Springfield 7, Massachusetts

NEW YORK

CHICAGO

CLEVELAND

LOS ANGELES

TORONTO

# PACKAGE MACHINERY COMPANY

Over a Quarter Billion Packages per day are wrapped on our Machines



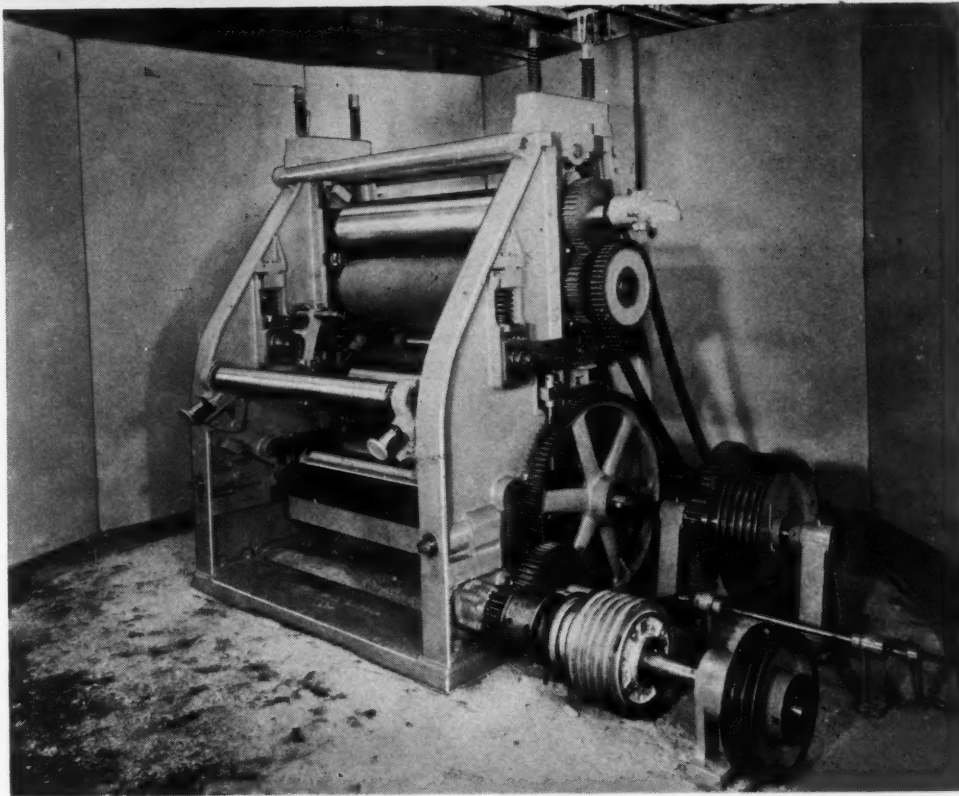
# TECHNICAL SECTION

● MACHINERY  
● PRODUCTION  
● TESTING

TECHNICAL  
EDITOR

CHARLES A. SOUTHWICK JR.

1—Drive view of a modern hot-melt coating and laminating machine meant for various light weight materials.



PHOTOS, COURTESY JOHN WALDRON CORP.

## LAMINATION—2. Methods and equipment

by Oscar De Sylva\*

Before entering into a discussion of methods and equipment it is timely that a review be given on some of the properties of materials that comprise laminations. It will then be more readily apparent how the elements of bonded structures govern methods and equipment design. In the field of laminations two-ply structures predominate for the simple reason that, aside from economic advantages and comparative ease of manufacturing, the protective and decorative requirements of the greater portion of the products to be packaged are satisfied by a pair of webs suitably bonded together. In these are found combinations of:

1. Film to film
2. Film to paper or board
3. Film to metal foil
4. Film to cloth
5. Paper or board to paper
6. Paper to foil
7. Paper to cloth
8. Cloth to foil, etc.

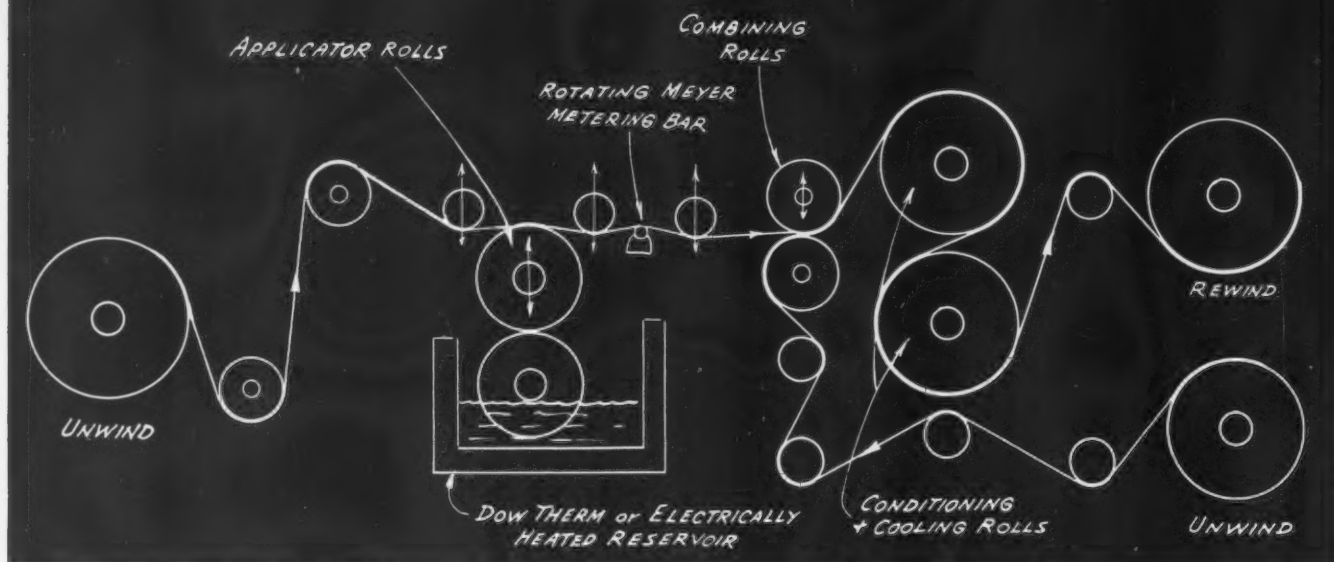
\*Shellmar Products Co., Mount Vernon, Ohio.

For each and every one of the possible combinations above listed in two or more ply structures we have a wide choice of laminants. The ultimate functional value desired in the finished structure governs not only the choice of plies and adhesives but also the method and equipment used for the production of the lamination.

Three-ply structures are occasionally met with, for example, three-ply glassines, or two glassines and film, or film, paper and foil. Laminations containing a greater number of plies are infrequent because (1) no particular advantage is usually gained thereby, (2) economic factors enter into play, (3) as the number of plies increases rigidity and poor working qualities develop, (4) equipment and adhesive limitations become pronounced and (5) dimensional stability decreases particularly when dissimilar materials are combined.

Since economic factors and manufacturing limitations regulate the weight, size (width) and gauge of cellulosic and synthetic resin membranes, it is found that equipment and methods must be adjusted to handle adequately these types of materials. Regenerated cellulose because of its sensitiveness to moisture and its adaptability to fluctuations in the water

## HOT MELT COATING & LAMINATING MACHINE



content of the neighboring element presents problems of combining that are peculiar to this type of material. Because of its sensitivity to water and the resultant dimensional changes that develop this sheeting cannot readily be bonded to dissimilar materials to provide a permanently stable structure. Therefore a careful choice must be made with regard to (1) the other ply, (2) the type of laminant and the method, and (3) the type of machine to produce the lamination.

Some measure of stability has been accomplished by the

3—Showing applicator of a hot-melt laminating machine.



application of highly water-vaporproof coatings (properly anchored) to the regenerated cellulose film. If the laminant is chosen so that it enhances the degree of impermeability to water vapor, then a reasonably stable lamination to dissimilar plies can be produced. Yet experience has pointed out that this stability is short-lived because the product in its passage from the laminating equipment to the consumer suffers through injury of the protective surface coating, so that deterioration is greatly accelerated.

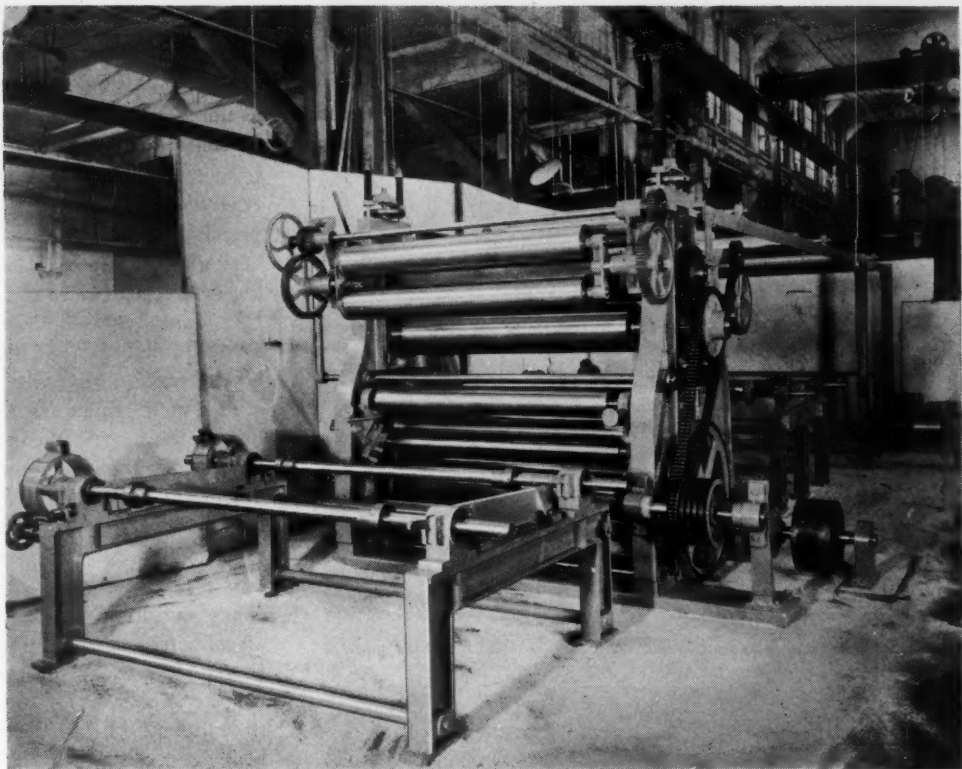
Films made from cellulose derivatives such as cellulose acetate, cellulose acetopropionate and butyrate are relatively insensitive to water vapor and thereby possess greater dimensional stability. Aside from this consideration, they possess enough rigidity and heat resistance to permit a large number of combinations of plies with similar or dissimilar elements that result in satisfactorily stable combinations. These types of sheetings, however, do not lend themselves well to combining with hot melt type adhesives because of their sensitive thermoplastic properties. Coated regenerated cellulose films fare better in this respect and many interesting applications have resulted therefrom.

Other resinous films, such as vinyl chloride-acetate copolymer, vinyl chloride and combinations of these with other synthetics (rubber polymers, etc.), are difficult to handle because they possess high values of extensibility. Combinations of these materials with similar or dissimilar plies can be produced satisfactorily if precautions are taken to provide the correct laminant and method. None of these resinous films, excluding cellulose esters, can be subjected to excessive temperatures in the laminating process without producing marked and troublesome dimensional changes. Other elements peculiar to the method and equipment enter in play which serve to enhance or moderate these effects.

Cellulosic materials—paper, paper board and cloth—present fewer problems because of the favorable characteristics of these materials for lamination. High tensile strength, low distensibility and dimensional stability to relatively high temperatures are attributes which make these stocks useful and comparatively easy to handle on laminating equipment.

These characteristics plus the insensitive nature of the

4—View of a modern, heavy-duty, wide-web coating and laminating machine most generally used on the lamination of kraft products with asphalt. It can operate at speeds up to 600 ft. per minute.

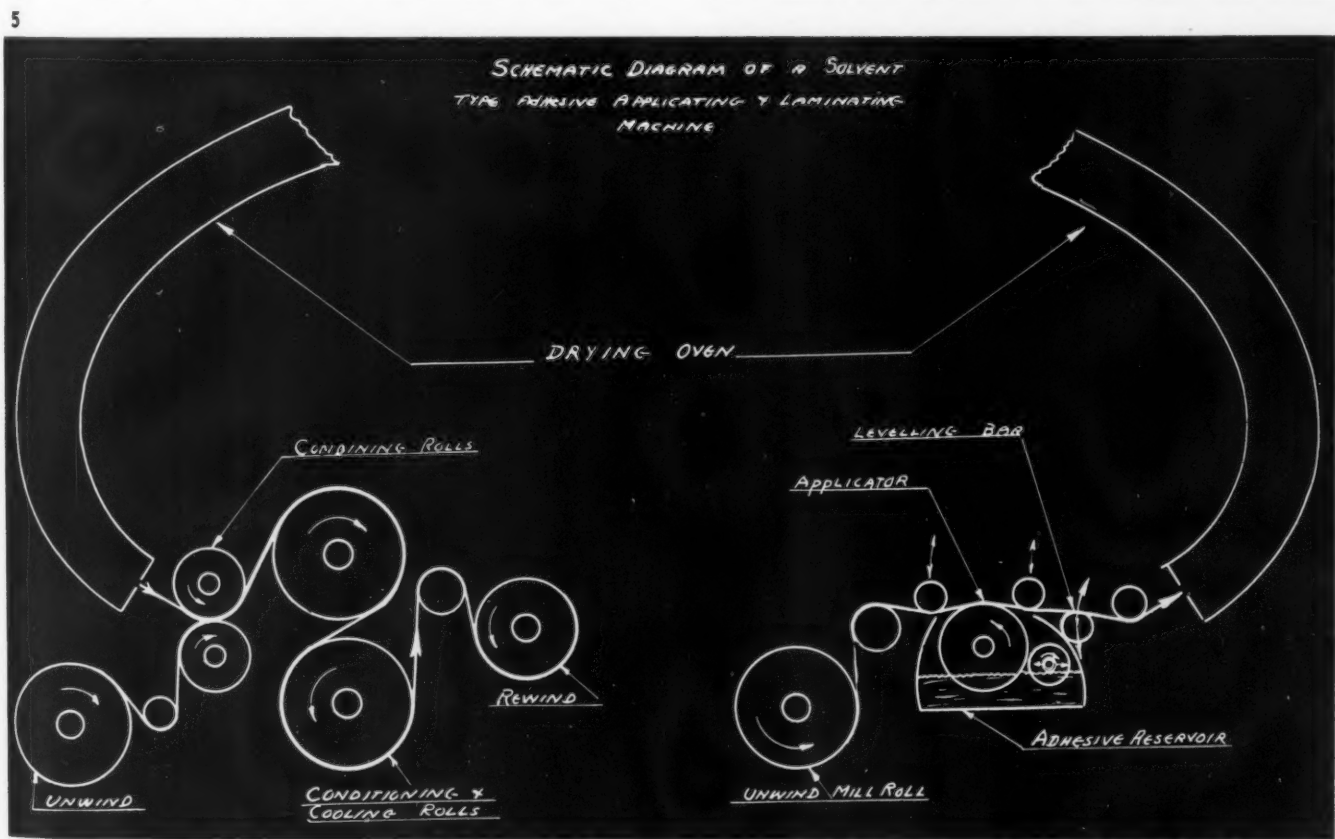


materials to organic solvents permit a wider choice of laminants and greater flexibility in the methods and equipment useful for combining to other plies. Cloth, of course, presents problems that in some instances are not easily surmounted.

The importance of the laminant cannot be underestimated for it is readily observed that the success or failure of the structure is entirely dependent upon this element. Present-day adhesives are tailor-made designed specifically for one type or group of laminations. Consideration is not only

given to its bonding power for any given pair of plies but also to its contribution towards the stability, durability and functional values of the finished product. Furthermore, the laminant must be modified to conform to the peculiarities of the method and equipment.

Laminants are broadly classified into two groups—solvent types for cold application and hot melts. The latter can be further differentiated at this point into wax and non-wax type resinous thermoplastics. In the solvent group we find





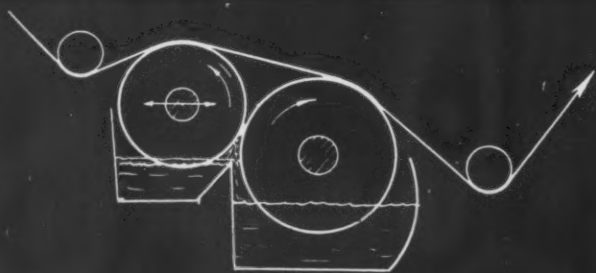


Fig 6 - REVERSE ROLL COATING

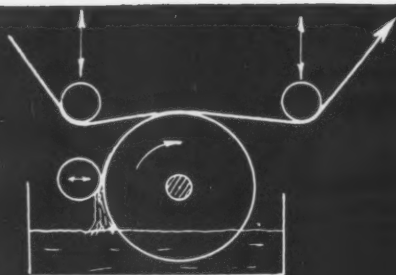


Fig 7 MODIFIED DIRECT ROLL COATING

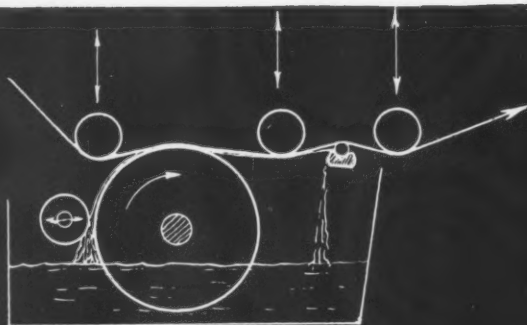


Fig. 8 MEYER BAR ROLL COATER

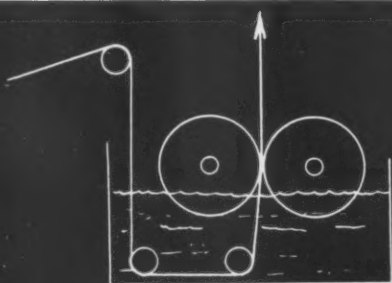


Fig 9 DIP-TWO SIDE ROLL COATING APPLICATOR

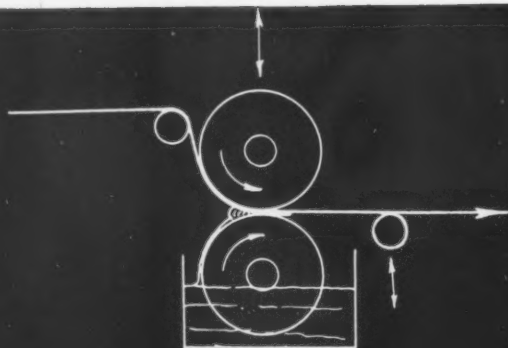


Fig. 10

DIRECT ROLL COATING WITH LEVELLING BAR

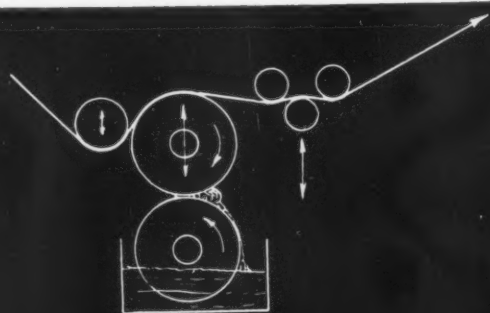


Fig 11

ROLL COATING USING TWO STEEL ROLLS & LEVELLING BAR

adhesives which effect the lamination by (1) fusion through the action of active solvents—the solvents affecting one or both of the plies, (2) adhesive solids deposition which though tack free when dry will properly bond together similar or dissimilar plies under suitable heat and pressure, (3) deposition of adhesive solids possessing high adhesive and cohesive properties which when solvent-free expose a tacky surface (the bonding of two or more plies is produced simply by pressing the two surfaces together), (4) deposition of adhesive solids from emulsions or suspensions wherein combining is effected before the liquid phase (commonly water) has been completely eliminated either through evaporation, absorption, or both. These and other characteristics are some of the factors governing methods and equipment.

Hot melt laminants, designed for high adhesive strength, have to be heated beyond their melting points to a temperature that will provide enough fluidity for ease of application. Combining is effected by bringing the two plies together under suitable pressure and heat. The foregoing discussion on some of the characteristics of the component parts of laminations serves to clarify the relationship between these elements and the methods employed for bringing them into an effective union. The governing factors for methods, therefore, are (1) ply characteristics and, more important, (2) the properties of the laminant used. The fundamental requirement of laminating is that two or more plies are brought together into intimate contact and held in that state by a bonding agent or adhesive. Combining is effected by:

1. Pressure
2. Pressure and heat
3. Heat

and this only after the application of adhesive has been made to one or more of the surfaces to be combined.

In these cases the plies involved must be maintained in a constant state of tension; otherwise, a discontinuous state will result in the lamination. (At this point it is well to point out that though the discussion has been focussed on continuous web laminations many of the foregoing features and controlling elements apply to sheet laminations.) Pressure combining dictates that the laminant must be in a tacky, adhesive state at the point of combining and the pressure be great enough to bring the plies together into intimate union, completely eliminating air and voids between the plies. The second is like unto the first with the exception that the webs must be heated to effect proper combining. In heat combining the adhesive is brought to a plastic state before combining. Pressure though present is not the controlling element. To say the least this is not fundamentally satisfying because we have divorced from the methods the other vital steps without which the production of laminations would be close to impossible. Therefore, to present a clearer picture of the

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processes used for combining, it is necessary to consider all the mechanical elements that come into play.

First and highly important is the application of the adhesive to one or more of the surfaces to be combined; secondly, the drying system for removal of the solvents, if solvent type laminants are used; and last, the combining unit. To this we must add the other mechanical features which are indispensable, namely, unwind and rewind mill roll stands and mechanisms and tension control units. Equipment designed for the use of hot melts differs principally in that the drying system is not present. The control over the heat to melt and apply the laminant becomes the important factor.

The value and efficiency of laminating equipment depends entirely on the following characteristics:

1. *Adaptability of the machine.* Can it handle adequately films, papers and foils in the available sizes, weights, gauges, and quality?

2. *Accuracy of the adhesive application.* Can it be accurately applied and controlled to fall within specification limits in uniformity, continuity and amount?

3. *Drying or solvent removal.* Is the equipment capable of evaporating the adhesive solvents at a rate rapid enough to provide economy of operation and without effect upon the continuity of the adhesive application?

4. *Web travel support.* Are the rolls rigid enough and in true alignment to withstand maximum web tensions without deviations?

5. *Combining rolls.* Can they be subjected to the pressure requirements without distortion taking place?

6. *Ply cooling facilities.* Is the cooling system adequate to permit top machine speeds?

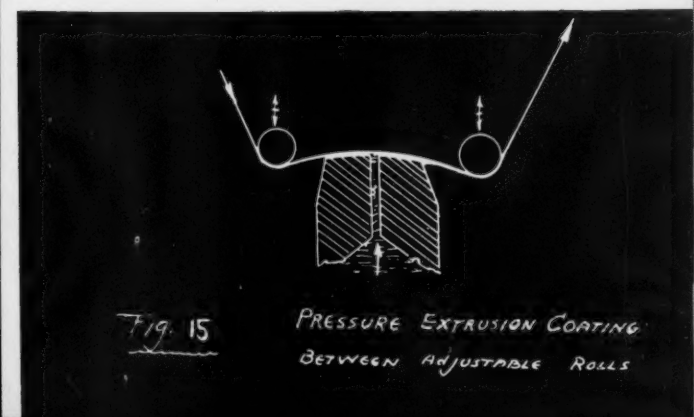
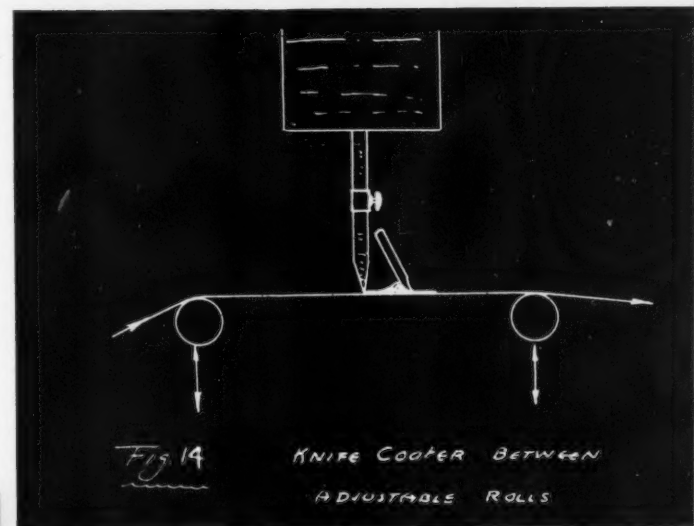
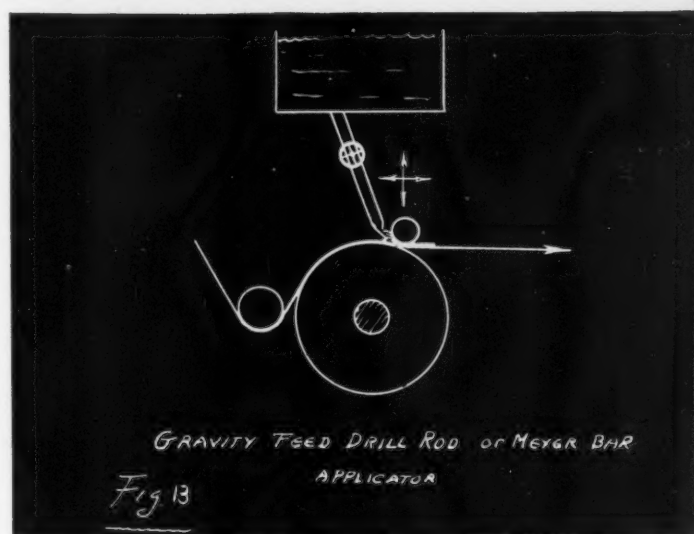
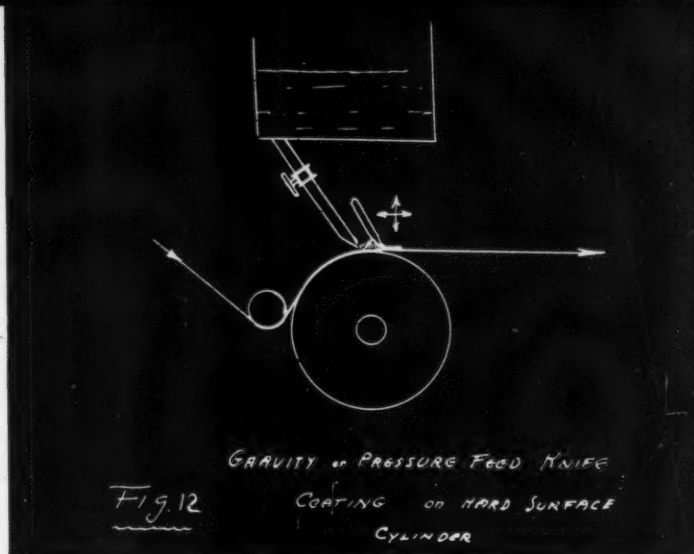
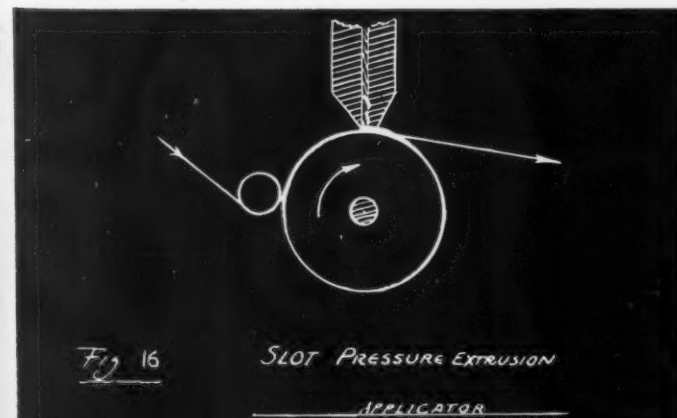
7. *Temperature Control.* Are the reservoirs, fountains, applicator rolls, drying ovens, cooling and combining rolls equipped to provide satisfactory control over each?

8. *Humidification.* Is the system equipped to control the moisture content of the stocks being processed?

Well-designed equipment provides the means and facilities so that most of the above-mentioned requirements are complied with. However, most of the present-day machines fall far short of meeting the above specifications because they were designed around a small number of applications.

Economics and ply limitations govern to a considerable degree the design of laminating equipment. Machines designed to handle wide widths and heavy weight stocks are found very unsatisfactory for narrow and light-weight films, papers and foils. Consequently an all-purpose machine is out of reason and machines are made to handle lightweight stocks and others to perform operations on heavy sheeting.

The most important and critical part of a laminating machine is the applying unit. The main differences between laminating machines usually center about this member. As has already been pointed out, a satisfactory lamination prod-



uct results only after a satisfactory adhesive application has been made. Numerous schemes have been devised to apply the laminant to one or more of the plies to be combined. The following illustrations point out the most popular schemes used today (Figs. 6-16).

Doctor-knife methods of adhesive deposition (see Figs. 12 and 14) are particularly useful for high-viscosity coatings where the weight of laminant being applied is not below 5 lbs. per ream. Irregularities in caliper of the base sheet mirror a corresponding irregularity in the adhesive application. Paper stocks in the heavier weights will vary as much as  $\frac{3}{4}$  of a thousandth from one side to the other. This means that at some point the adhesive deposit is extremely light and consequently the resultant lamination is unsatisfactory. On stocks of uniform gauge and which are insensitive to the components of the adhesive this method of application provides continuity and uniformity of film which is not easily duplicated or excelled by other methods. Besides this, it permits higher solids applications which provide economies in solvents and increases production.

Roll coating with the Meyer bar (see Fig. 8) is a very popular and widely used method for hot and cold applications. The principal feature of this scheme is that an excess of material is applied by a roll to the web and directly beyond this point it is metered out by a wire wound round which presses against the web between two adjustable idler rolls. By varying the diameter of the wire the space between turns changes proportionately so that different volumes of material will pass through. The excess is returned to the fountain.

This method lends itself well to a variety of applications where the requirements are not too critical or whenever very light or heavy weight applications are not required. Of prime importance of this adhesive application is tension control.

Insensitive rigid films run admirably well on this particular scheme or on its modified forms not only, as already pointed out, for cold but also as well for hot melt adhesive applications. One fact of importance which has not been mentioned is the necessity of changing the wire wound rod when a change in the amount of material to be deposited is required. The diameter of the wire controls the metering action; therefore, to vary the amount of laminant it is necessary to change to a rod wound with wire of a diameter that corresponds to the weight of coating desired. This consequently sets forth the prerequisite for a stock of wire wound rods of different wire diameters so that flexibility in metering can be maintained.

In contrast to the above-outlined method, there are two other schemes that have found considerable favor in coating operations. These are illustrated in Figs. 6 and 7. In both cases, accurately made, smooth rolls are employed. The upper roll of Fig. 6 is movable on a horizontal plane, while the other roll remains in a rigid mounting. By changing the position of the movable roll, a metering action results. The second method (Fig. 7) is very similar with the exception that only one roll is used for the adhesive application. Both of these schemes are very useful because it is possible to apply very light and heavy coatings in a very uniform manner. With control over the viscosity of the laminant, this method provides a very accurate metering action over a wide range of applications.

The foremost disadvantages of these two schemes are:

1. The adhesive applied does not transfer in a smooth manner, thereby necessitating some leveling device past the point of application, and
2. The reverse roll introduces a drag on the film or paper which limits the application to plies that are sub-

stantially rigid and insensitive to the components of the laminants.

Aside from this, light-weight applications of high-viscosity materials cannot be effectively made. Method two (Fig. 16) can be used also as a reverse roll application if the arrangement of rolls and turning direction are reversed. In such a scheme the limitations are identical to those illustrated in Fig. 6. Both of these methods have been very successfully used with lacquer and resinous type adhesives in applications to cellophane, acetate film and paper stocks. Applications to distensible films are highly unsatisfactory, particularly when a light-weight coating deposit is required.

The roll coating method, as illustrated in Fig. 11, is extensively used for adhesive applications. If the unit is designed with good control over the metering or impression roll, very satisfactory applications to a variety of stocks can be made in a limited range of coating weights. Heavy applications of medium to low viscosity adhesives cannot be successfully accomplished by this method. High-viscosity adhesives in the heavier range of applications function satisfactorily. In practically every case, however, it is necessary to level out the coating by some smoothing device as illustrated. Otherwise, the ridge pattern formation resulting from the separation of the web from the coating roll not only impairs the functional value of the lamination but its attractiveness also.

The pressure extrusion methods, as illustrated in Figs. 15 and 16, are not widely used at present because of the complicated system required to maintain the method under accurate and flexible control. Nevertheless, these two schemes possess a high degree of merit in that it is possible by controlling liquid pressure and web speed continuous, smooth and uniform depositions of adhesives can be accomplished on a variety of stocks. These two schemes illustrate the more advanced techniques in coating methods. Porous structures, such as machine finished paper stocks, would not function well because of excessive penetration caused by the extrusion pressure of the operation. Therefore, we find this scheme more or less limited to non-porous plies possessing slight variations in thicknesses.

In the production of a three-ply structure in one operation, the scheme illustrated in Fig. 2 is commonly used for both hot and cold adhesive applications. If penetration is undesirable on porous plies, then this method of application is very unsatisfactory because of the web travel through the liquid. Another limitation is that the majority of three-ply structures require different laminants between each pair of plies and with this particular scheme it is readily seen that this is not possible. This particular limitation consequently makes this method of three-ply lamination unpopular. Common practice is either to make the lamination a two-step operation or else provide the laminating machine with two applicators so that the operation of combining the three plies can be accomplished in one step.

It is readily observed that all of the above schemes for adhesive application can be modified to some degree so that the coating process can be better adapted to the peculiarities of the plies to be coated. In hot melt adhesive deposition, it is standard practice to provide controlled heat in the applying roll or rolls so that lower melt temperatures can be maintained. After solvent type adhesives have been applied to one or more of the plies to be combined, it is necessary to remove the solvents, completely in most cases, before combining is effected at the draw rolls.

In the foregoing description of methods and equipment, the writer has been limited by (*Continued on page 150*)





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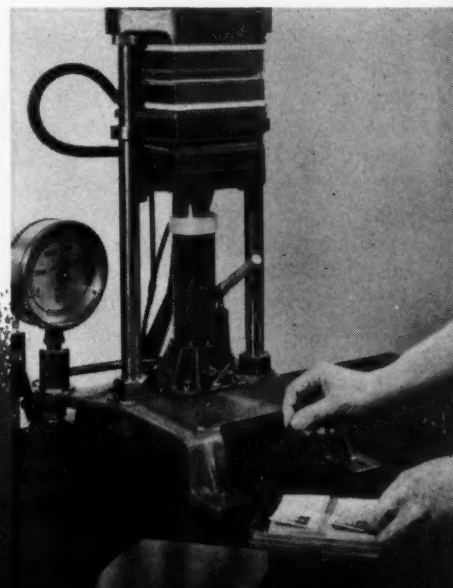
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# QUESTIONS and

# Answers

*This consultation service on packaging subjects is at your command. Simply address your questions to Technical Editor, Modern Packaging, 122 East 42nd St., New York 17, N. Y. Your name or other identification will not appear with any published answer.*

## Compactness for wood shavings

**QUESTION:** *We have a by-product which consists of thin wood shavings. We have developed some uses for this material which at present is hand packed into various sizes of bags. In the smaller sizes we use paper and in the larger sizes burlap. Because of the nature of this product the finished packages are bulky and we are interested in a means of packaging this material in a more compact form without an expensive machine installation.*

**ANSWER:** This is a problem which can only be solved by the use of your ingenuity in adapting either existing equipment or readily available used equipment for certain phases of your operation and by the use of hand labor to keep the cost of the installation to a minimum.

A brief outline of a possible operating system would be a press which would compress the product onto the wrapping material or into a pre-formed bag or sheet arrangement so that the wrapping could be readily completed by hand operations after being discharged from the press. A procedure of this kind was formerly used in the Philippine Islands for the packaging of shredded coconut. This operation was done by using a bottomless box for the sides of the mold. This box was placed on the bottom platen of the press and lined with two long strips of paper, each sheet being sufficiently long to go around the product in each of two directions. This resulted in two plies of paper at the bottom of the box where the sheets crossed. The coconut was then put into this mold and compressed. The plunger of the press fitted loosely into the cross section of the mold. This operation was repeated until the mold was filled with the compressed charge of the proper weight, the proper weight being obtained by varying the degree of compression to accomplish the proper loading within the designated volume. The mold was then carefully drawn up over the sides of the compressed product and the ends of the paper overlapped at the top and pasted in place. This resulted in a wrapped cube of product which was then slipped into a tightly fitted pre-formed bag or over-wrapped. The double-wrapped unit was then slipped into a wooden shipping case.

In your case, however, the larger sizes could probably be shipped without the additional case if the compression was sufficiently heavy or if sufficient plies of paper were used as the wrapper. In the smaller sizes such a unit could be inserted in a paper carton. In the case of wood chips it may be necessary for you to humidify them to obtain the proper compression and to keep them from springing back when the pressure was relieved.

Such a production setup would use the minimum of equip-

ment and its efficiency would depend on the kind of installation and your ability to perform such operations with the minimum of labor cost.

## Free-flowing salt samplers

**QUESTION:** *We are large packagers of salt. We use, for our consumer package, an asphalt-laminated paper, canister-type package and have no trouble with the moisture getting into the package to affect the free-flowing quality of salt. However, we also have a considerable business in sample packages for one-time use. We like to reproduce these in miniature round containers, about the size of a lipstick, similar to our consumer package for promotional purposes. We have found that we cannot maintain the free-flowing qualities of the salt in the small containers, although we use the same type of asphalt lamination with double protection over the dispensing device. Can you give us any suggestions as to how we may overcome this packaging difficulty?*

**ANSWER:** This difficulty with the sample salt packages is a result of the large surface exposed per unit of weight of the salt. This means that the moisture transmission of the surface of the small package will have to be increased until it is in the same proportion as your larger unit.

Contents	Package Size	Surface Area	Surface Area per 1 Oz. of Product
1 oz.	1" diameter × 2" height	8 sq. in.	8 sq. in.
32 "	3 <sup>7</sup> / <sub>8</sub> " diameter × 6" height	82 " "	2 <sup>1</sup> / <sub>2</sub> sq. in.

Assuming that your present large unit has a water-vapor transmission rate of about 0.5 gram per 100 sq. in. per 24 hrs. at 100 deg. F. and 90% humidity, it would be necessary that the small unit have a value of 0.5 by (2.5/8) or 0.16 gram.

You can make a small fibre container having a 0.16-gram overall transmission value either by multi-ply of asphalt or by using glassine laminated with at least 12 lbs. per ream of waxy laminate to a special finish board stock. It will also be necessary to improve the paper end caps either by the use of multi-ply of asphalt or by use of a cellophane laminated board. In this case, the cellophane should be adhered to the board stock with a heavy coating of a waxy laminate. It will also be necessary for you to take special precautions in insuring the fitting of these small caps to the fibre body to reduce as far as possible the mechanical porosity of this small package. The small unit manufactured in accordance with these specifications and having a package moisture transmission of the value indicated, will carry 1 oz. of the product equally as well as the larger unit.



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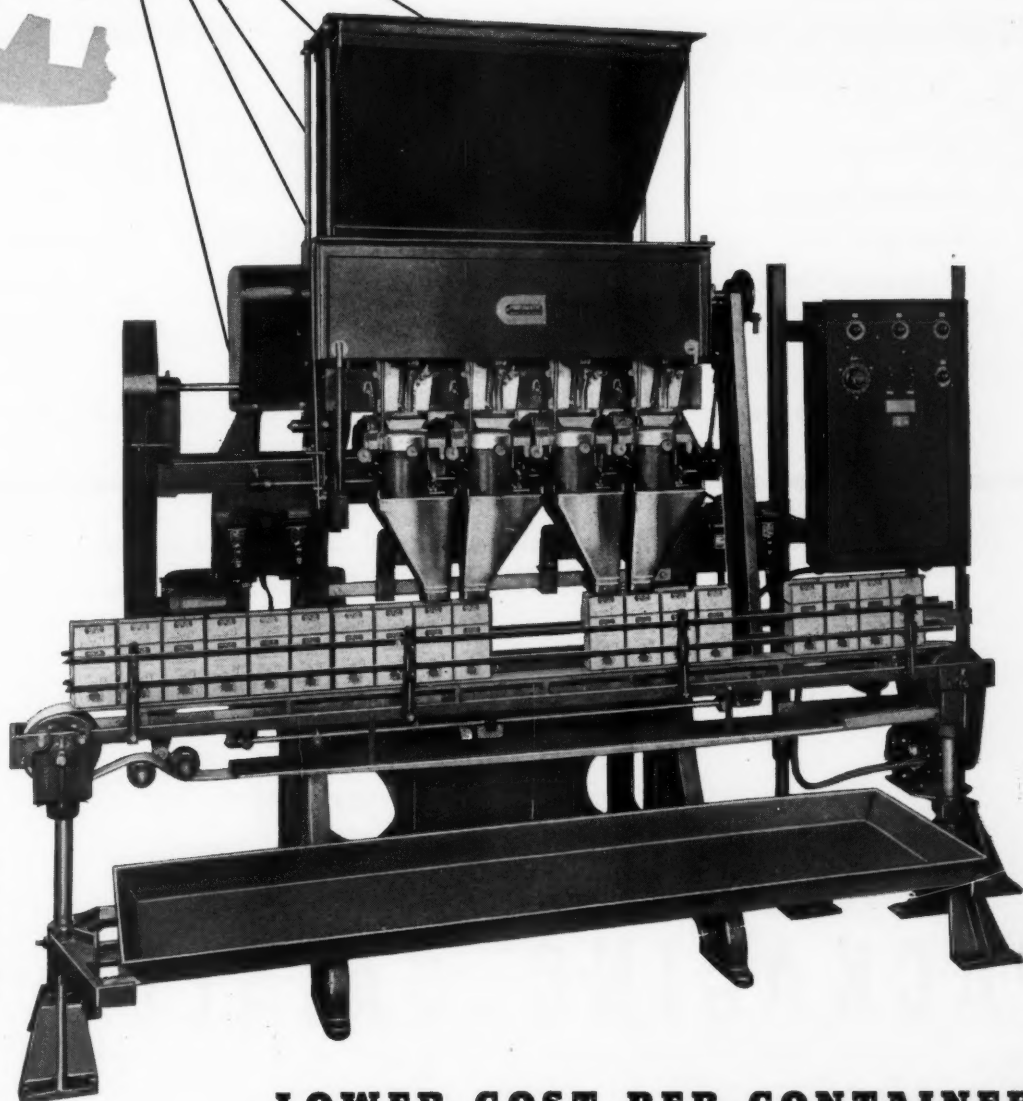
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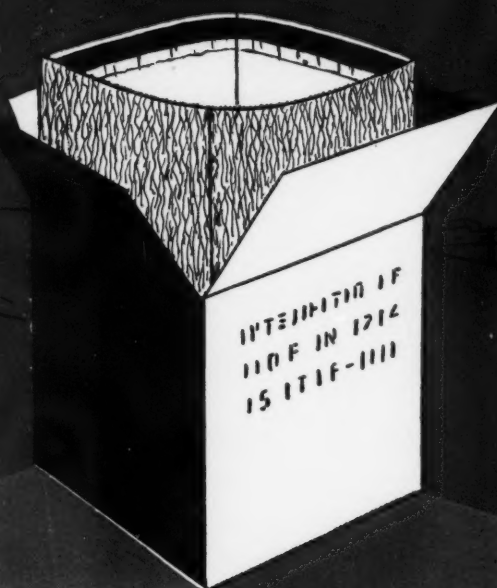
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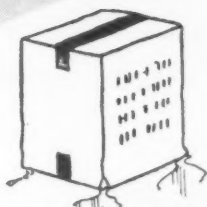
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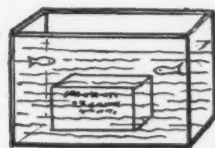
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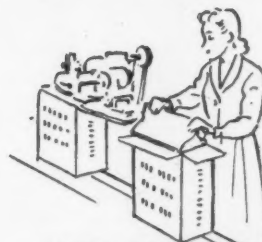
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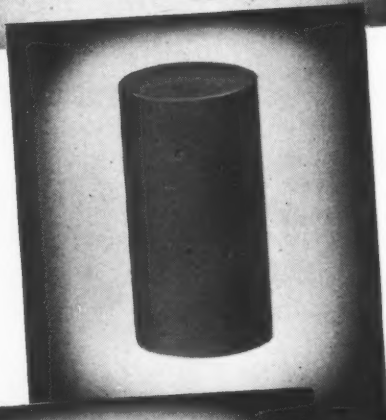
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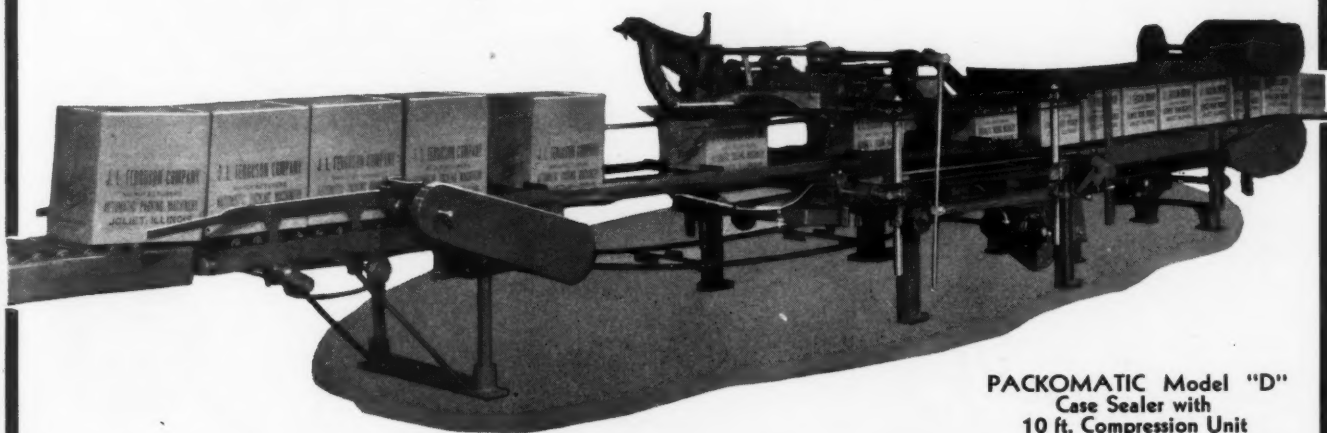
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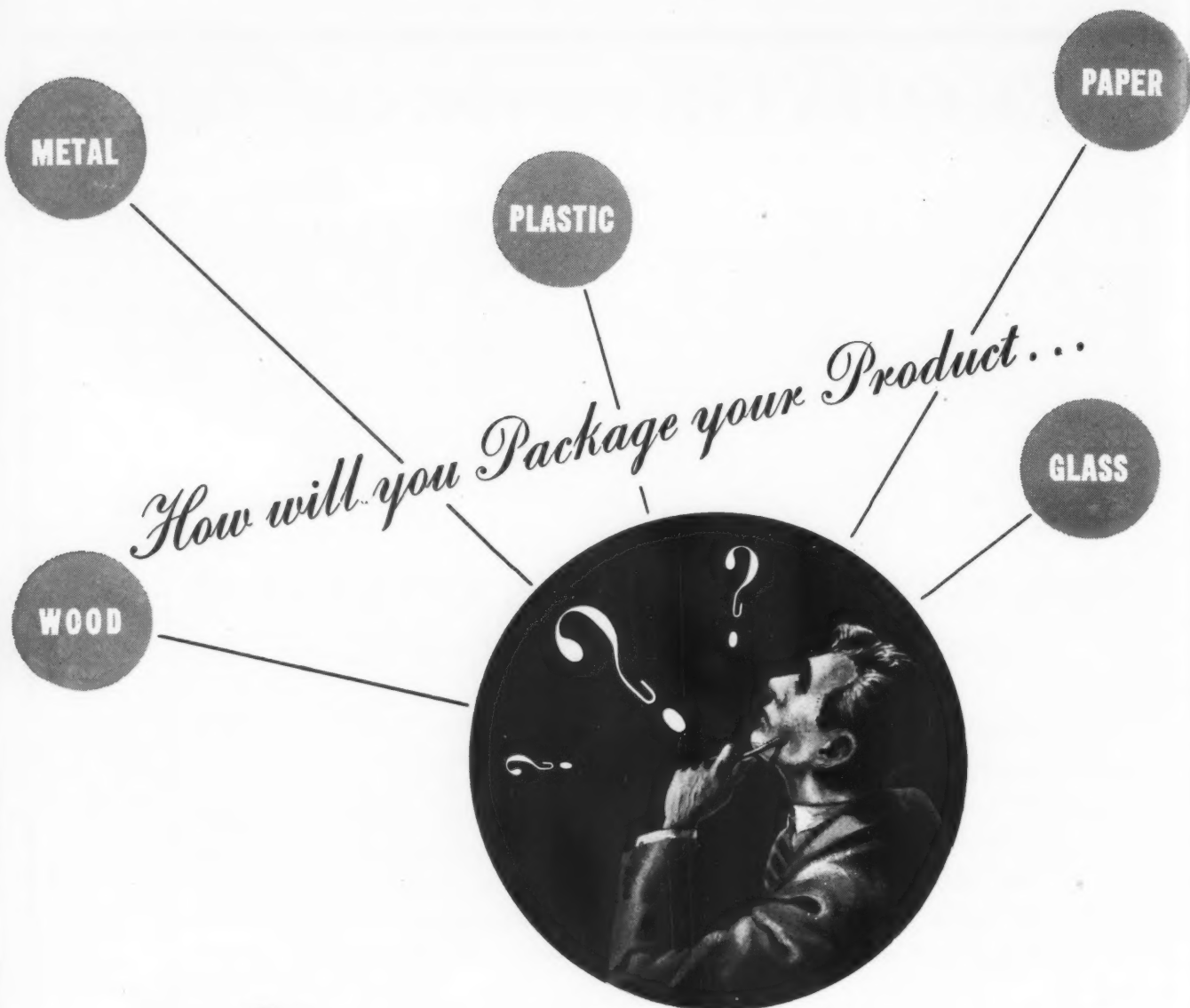
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# WASHINGTON REVIEW

by R. L. Van Boskirk

● **Aluminum to the Rescue?**—As this is written, people in WPB are doing more talking about aluminum, probably, than any other one subject. The over-all picture is still murky because brass hats continue to argue about how the bright metal should be distributed and others argue about facilities for processing it into the various forms needed. Aluminum foil is an example. One day there are rumors that the Army has cut its demands anywhere from one-quarter to a half. The next day there is a story that a certain processor has been asked to double his production for the Army. By the time this is printed the picture may be clear, but the best guess offered at the moment is that there will be a good quantity available at least for crown and closure liners—some of which finally have been authorized—in the near future.

When more aluminum foil becomes available, first uses will be for such things as candy, gum, cheese, dried fruits, etc., which are now using paper. It may actually become a substitute for paper. There is not much chance that foil will be available for such things as cosmetics for some time to come, however.

First big explosion in aluminum to hit the container field was the July 3 announcement that 7,000,000 lbs. would be made available for "experimental" use in the manufacture of food and non-food cans to be used for such products as baking powder, cocoa, tobacco, toothpowder and the like. All requests for aluminum for such purposes were to be in by July 10 in order to speed up experimentation and give WPB an idea of how the stock might be divided. It is presumed that aluminum cans for these purposes will be ready for delivery late in September.

If the aluminum cans prove satisfactory they will save a sizable tonnage of fibre and ease the pressure on other containers for most non-food items and many dry-packed products that have been using substitutes for metal cans.

There is not much chance of diverting aluminum to liquid food packs because of the soldering problem. Even dry products may not be successfully packed in all cases because of a supposed effect on the contents. Previous to the war liquid ointments were packed in aluminum, but that was about the limit on moist packs. It is also difficult to make deep-drawn

aluminum cans. Typewriter ribbon boxes of good depth have been made and German sardines packed in two-inch deep-drawn cans have been seen, but by and large there have been few examples. Another unknown quantity is expense and much of the final result hinges on that factor alone.

Theoretically, the packaging field could use at least 20,000 tons of aluminum a year for cans if everything not now allowed in tin could be diverted to aluminum, but that is theory only because there are conversion problems and some items simply are not practical for aluminum.

Aluminum closures passed the experimental stage some years ago and it is presumed that they will be coming out of the mill in sufficient quantity to take the edge off closure shortages in a reasonably short time.

There is also a possibility that aluminum screw caps may prove satisfactory for such things as liquor bottles, but their use on soft drink bottles where the aluminum would have to be crimped is still in the realm of experimentation. Cost, of course, is particularly important in this field.

Aluminum collapsible tubes are of course already in wide use and will probably be even more widely used.

The general consensus seems to be that aluminum will be of material assistance in easing many of the present container shortages, but that it will take at least a few months time before there is any marked effect.

● **Machinery Situation**—Several months ago the industry advisory committee recommended liberalization in the granting of preference ratings for packaging and labeling machinery. Up to this time, there is little evidence in Washington that this liberalization has taken form, although most applications are handled in regional offices and the news may not yet have trickled back to Washington. At that time, WPB announced that it was placing skilled men in the field to handle this problem and it was hopeful that the individual effort of these experts would permit the Government to obtain a better understanding of each company's needs. Machinery manufacturers feel that some sort of arrangement will have to be made before wholesale cancellation of war orders because many of them have

enough business scheduled to keep them going for a year and a half but their customers will be unable to handle postwar business immediately following an armistice unless they can tool up with new machinery. In other words, they want permission to go ahead with the manufacture of new machines so that their customers will be able to make a rapid change-over.

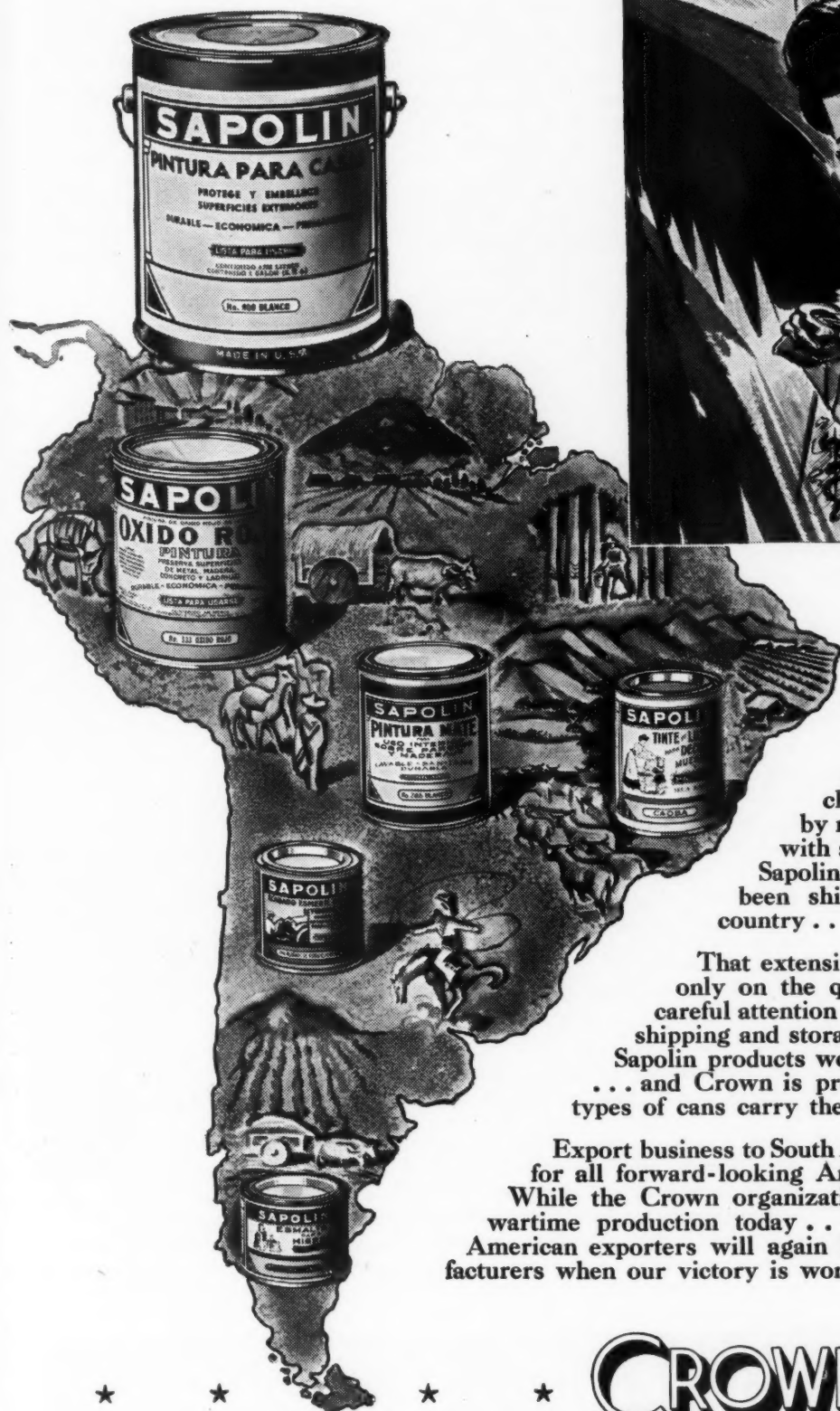
● **Glass Production Steps Up**—The reason for liberalization of the glass order seems quite apparent when statistics on the industry are investigated. Last year the production was about 92,500,000 gross although shipments were about 95,000,000. The difference was in inventory. The old order was written on that economy. But this year it appears that around 100,000,000 gross can be supplied and naturally WPB can ease up a bit. Food and drug needs were the first to be considered, as shown by the order. It will take a couple of months to see how the relaxation works out and it may be possible to make more glass available for other items later in the year. At the present time there is little tendency to relax restrictions further on such things as cosmetics, beverages, tobacco and chemicals. Incidentally, it is difficult to tell what effect the whiskey holiday will have on bottles. If more whiskey is distributed, more bottles will be needed, but the distillers may have their own ideas about how they will do it.

Metal closures for glass are still out of balance with the container itself, and substitutes will still have to be used on some products unless the aluminum program goes through rapidly.

The glass folks put up quite an argument over possible curtailment of their product because some other item such as shipping containers might not be available. They insisted that they could use their own ingenuity to find a way to ship them. Apparently they won the argument.

● **Standardized Bottles Here to Stay?**—A Washington authority on standardization is convinced that the standardization order for glass has not only been a big help to the industry during the emergency, but that it has given manufacturers a great many ideas they will never give up. In the first place it encouraged long runs on fewer sizes which is a form

# Good Neighbor for 60 Years!



"Sapolin" is one of the best-known of all American trademarks in South America . . . quoted on the commodity exchanges . . . specifically mentioned by name in recent Trade Agreements with several countries. For sixty years Sapolin Paints, Stains and Varnishes have been shipped to every Latin-American country . . . except the Argentine.

That extensive export business was built not only on the quality of the product . . . but by careful attention to the special problems created by shipping and storage conditions. The containers for Sapolin products were selected with the utmost care . . . and Crown is proud that its Doubletite and other types of cans carry the Sapolin trade-mark.

Export business to South America will undoubtedly increase for all forward-looking American firms once peace comes. While the Crown organization is concentrating on essential wartime production today . . . the experience gained serving American exporters will again be at the command of all manufacturers when our victory is won!

## CROWN CAN

CROWN CAN COMPANY • NEW YORK • PHILADELPHIA • Division of Crown Cork and Seal Company, Baltimore, Md.

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of good old-fashioned American mass production that the glass industry will do its best to hold—at least in part.

Of course it cannot be adapted to every field. It will probably be most effective in the food field and for those products that use large sizes. Olive oil, for example, may continue to be bottled in odd shapes, but there may be fewer sizes and elimination of tiny or fractional pint size receptacles. Drugs and medicines may well concentrate more on Boston bottles because they are easier to make than flat bottles. On the other hand cosmetics may even increase their sizes and styles because of sales appeal, but it is felt that they could easily turn their attention to redesigning the generally used over-size outer box in the interest of saving paper.

The above is only one authority's opinion. Paper salesmen may well have a different idea about reducing box sizes for any product after the war is over.

● **Thin Paper Labels**—The label makers are still concerned over the possibility that they will have to print labels on 45-lb. stock. They were originally ordered to drop from 50- to 45-lb. stock on June 6, but have managed to tell their story satisfactorily enough to get at least a temporary surcease.

However, they do not have much hope of maintaining their labels on a 50-lb. basis and are now working on tests with 45-lb. stock despite their fear that more paper will be wasted in printing and applying labels to receptacles than there would be if they were allowed to remain on a 50-lb. basis.

● **Container Board Quickie**—No one likes to read figures but this figure-picture of the containerboard situation tells the story in the most graphic manner we have seen; total production in 1941 was something over 4,000,000 tons; in 1942 it was 3,755,000 tons; in 1943, 4,000,000. Total production authorized for 1944 is 4,400,000 tons, of which V-box authorization is 1,016,000 tons. Total V-box production in 1943 was about 500,000 tons. Transferred into boxes this means that 400,000,000 V-boxes will be made this year or nearly twice the 219,000,000 made in 1943. The total of all corrugated and fibre shipping containers is something like 5,000,000,000 boxes. The anticipated demand for all containerboard in 1944 is 5,680,000 tons. Incidentally, the Armed Forces have drawn up new specifications for V-board that will supposedly require less virgin pulp per box without impairing the quality of the containers.

● **Notes on Paper**—Greeting card restrictions have been changed to 80% of the total number of designs produced in 1942 and paper inventory is limited to 90 days' supply. . . . An amendment to

Direction 1, Preference Order M-93 included the following items granted preferred production status; gumming stock, waxing paper, base for ordnance wrap, tag stock, waxing tissue. . . . After deduction of approximately 212,000 tons of wood pulp for export and for the manufacture of non-paper products requiring wood pulp, and allowing for increased use of waste paper, it is estimated that total paper and paperboard production for the third quarter will be 4,341,637 tons, compared with 4,335,353 tons in the second quarter. . . . 2,315,900 tons of paperboard will be produced in the third quarter in comparison to 2,307,835 in the second quarter. . . . Under a Government release of June 30, Army representatives were represented as complaining that several paper companies have failed to give complete co-operation and WPB officials then pointed out their power to direct individual mills to produce specified papers for Army orders and hinted that such powers might be used unless essential Army demands were met.

● **Canada's Curbs Eased**—Recognizing that such packaging materials as glass and metals are in easier supply in Canada, the Canadian Wartime Prices and Trade Board has removed restrictions on the manufacture, packaging, distribution and sale of cosmetics and toilet goods.

● **Tin Cans Unchanged**—There is little change in the tin can situation. Steel facilities are the bottleneck and manpower problems in steel are an added deterrent. However, it is expected that more food will be canned this summer than ever before. That's one reason there are so few cans for other purposes. The Texas tin smelter is reported in good production, but not at capacity because it is still difficult to get the concentrates from Bolivia and Africa. Salvage is going along on an even keel, but it is involved in personal service such as scrap collecting, and the manpower shortage has hindered full collection.

● **Folding and Set-up Boxes**—There isn't much to be said about the amendment to L-239. It had been hanging fire since February at least. Officials kept holding back because they wanted to include everything at once and as a result there has been continuing use of paperboard in fields where it might have been curtailed. One person described the situation as similar to that of a man who owes \$100 and decides he won't pay anything until he is able to pay the complete amount. As a result he never pays his debt, whereas if he had started paying in small amounts, the debt would have been off his hands. The history of this order is rather sordid. Both Government and industry could be criticized for their inability to start these

savings months ago, but perhaps it is best to remember only that revised L-239 is now under way with an initial saving that should amount to about 70,000 tons of paper. Not a great quantity, but at least a worthwhile effort.

● **Re-Use**—There is still complaint from some sources that it would be better to send all used containers to the beaters. One industry advisory committee member reports that damaged shipments in used containers are out of all proportion to the expended effort. But the point to remember is that scarcely any new boxes are going to products with less than an AA-3 rating and if all used containers were macerated, there would be no boxes at all for lower-rated products. It seems that it is up to the industry to continue to use ingenuity in reconditioning containers.

● **Re-Formed Caps**—It is no longer a secret that re-formed caps are a pain-in-the-neck to most bottlers. They not only cost two or three times as much as new crowns, but they are more troublesome to use, according to many bottlers. However, circumstances being what they are, bottlers seem eager to get them because of new crowns are far from adequate.

● **BRIEFLY**—Transportation charges may be added to ceiling prices of hide glue stock by collectors, or other persons who are not producers, according to an OPA announcement. . . . Donald Nelson has put the Government's official stamp on a request asking retailers to urge consumers to bring their paper bags with them; to accept unwrapped goods whenever they could be safely carried otherwise and to salvage all usable wrapping paper and cardboard boxes. . . . WPB has extended the date on which orders may be placed for fibre shipping containers, carrying AA-1 priority, for delivery directly to the Navy, from July 1 to October 1, 1944. . . . Restrictions on wooden shipping containers for packing certain fruits and vegetables after July 1, 1944 have been removed from Order L-232. . . . 1,871,337,000 board feet of lumber were allotted to containers for the third quarter—the largest allotment to any item on the list. . . . Tag Industry Committee members met with WPB, stressed the need for copper wire, got no encouragement, then asked that allotment of shipping containers be raised from 50 to 70% of 1943 usage. . . . WPB has prohibited use of reground cork scrap in numerous commercial items because it is needed for beverage bottle caps to reinforce continuing raw cork shortage. . . . Use of waste manila rope in paper manufacture has been limited to a few selected items under June 27 amendment to M-294. . . . WPB has announced that it may be possible to discontinue glue allocation at beginning of fourth quarter.



# NOW AVAILABLE!

## **Armstrong's Embossed-Top Corks... prewar quality, with HARDWOOD tops**

**T**HE same attractive, sure-sealing Armstrong's Embossed-Top Corks—so popular before the war—are again available in large quantities. Materials on hand are being used to fill our large backlog of orders. Additional materials are in prospect which we hope will enable us to make substantial extra quantities of embossed-tops before the end of the year. Orders for these top corks will be filled in turn as received. They're prewar quality Armstrong's Corks—with tops made from seasoned hard-

wood that won't warp, chip, or twist off.

You can order these closures now, in stock designs, or in your own distinctive design. So if you're looking for a closure that's dependable, that's easy to remove and replace, that will add color and individuality to standardized war-time containers, ask your Armstrong representative—now—about Armstrong's Embossed-Top Corks. Or write to the Armstrong Cork Co., Glass and Closure Division, 5908 Prince Street, Lancaster, Pa.



# ARMSTRONG'S EMBOSSED-TOP CORKS

# U. S. patent digest

This digest includes each month the more important patents which are of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at ten cents each in currency, money order or certified check; postage stamps are not accepted.

**HANDKERCHIEF PACKET.** D. S. Warner, Buffalo, N. Y. U. S. 2,348,041, May 2. A handkerchief packet comprising a casing member or thin section and having a pair of major wall portions of slightly curved sectional form disposed generally in concentric spaced relation, with an assembly of handkerchief tissue sheets disposed in superposed pack form and pack folded in accordion pleated manner along two parallel lines, said packet being nested in said casing.

**COSMETIC HOLDER.** A. Gelardin, New York, N. Y. U. S. 2,347,774, May 2. A cosmetic holder comprising a cup-shaped bottom having a shoulder portion, and sleeve being formed with at least one longitudinal slot, a cosmetic stick carrier having integral therewith at least one lug on its peripheral surface adapted to be disposed within the slot.

**TIRE COVER AND PACKAGE.** C. M. MacChesney and A. B. Wilson (to Acme Steel Co., Chicago, Ill.). U. S. 2,348,084, May 2. A package comprising a tire casing, a flexible cover enclosing said casing, said cover extending around said casing and over the inner annular surface thereof.

**CARTON.** C. H. Goodyear (to Fibreboard Products, Inc., San Francisco, Calif.). U. S. 2,348,377, May 9. A carton having spaced lines of weakness in walls thereof to provide a tear strip for effecting separation of the carton into main and cover sections upon removal of the strip.

**CARTON.** C. H. Goodyear (to Fibreboard Products, Inc., San Francisco, Calif.). U. S. 2,348,378, May 9. A carton comprising side and end walls, and a bottom including a flap hinged on each wall, each side flap being hinged to a different end flap on lines of intersection diagonally opposite corners.

**CONTAINER.** B. Rous (Federal Carton Corp., New York, N. Y.). U. S. 2,348,310, May 9. A carton which consists of an integral blank which is folded into carton shape, each outer wall of said carton being of rectangular shape.

**PACKAGING.** D. R. LaPlace (to Bocil Corp., Pittsburgh, Pa.). U. S. 2,348,551, May 9. A carton having inwardly folding end flaps and inwardly folding side flaps, the end flaps having double-lobed staples thereon arranged in a row with the re-

spective lobes thereof at opposite sides of the line along which the side flaps meet when they are folded in. Each of the side flaps having a row of holes therethrough positioned to register with said lobes.

**CONTAINER.** A. Abrams, D. W. Davis, G. W. Forcey, G. C. Rumberger and C. L. Wagner (Marathon Paper Mills Co., Rothschild, Wis.). U. S. 2,348,689, May 9. A container for packaging hot flowable materials congealable upon cooling to a solid condition, formed from a sheet material provided with an adherent, continuous, flexible, thermoplastic coating.

**MANUFACTURE OF INFUSION PACKAGES WITH HANDLES.** L. Barnett (to National Urn Bag Co., Inc., Long Island City, N. Y.). U. S. 2,348,201, May 9. A packaging machine with co-operating mechanisms for making and filling bags including means for forming heat sealed closure seam joints, and means provided for transforming structural portions of said joints to provide an elongated handle.

**MEANS AND METHOD OF PACKAGING POTATO CHIPS.** R. W. Wheeler, Cleveland, Ohio. U. S. 2,348,509, May 9. A method of packaging potato chips which includes the steps of providing a carton of predetermined size to receive a number of sub-packages in collapsible flexible bags of bellows type structure.

**PACKING MACHINERY.** A. G. Rose (to Rose Bros., Gainsborough, England). U. S. 2,348,650, May 9. An apparatus for causing containers to move successfully to be filled and packaged.

**CAN CLOSURE AND METHOD OF MAKING THE SAME.** A. G. Hatch (to Fibre Can Machinery Corp., Rutland, Vt.). U. S. 2,350,312, May 30. A closure for closing fibrous container bodies for the packaging of oil or the like.

**CIGAR BAND.** A. Fichman, Neponsit, N. Y. U. S. 2,350,222, May 30. A cigar band comprising a sheet of paper of predetermined size and shape, printed matter on the face thereof, a layer of organic solvent soluble varnish of predetermined thickness on the face thereof, a substantial area at one of the lateral edges of said face being free from varnish, a layer of water soluble gum approximately the same thickness on said unvarnished area, and

substantially contiguous with the varnished area, the ends of said band being adapted to be united without the application of heat.

**FEEDING MECHANISM FOR WRAPPING MACHINES.** C. J. Malhiot (to F. B. Redington Co., Chicago, Ill.). U. S. 2,350,244, May 30. A wrapping machine comprising means to feed a web of wrapping material continuously to a predetermined position, means for cutting the web of material into sheets, means to apply a continuous strip of tape to a plurality of said cut sheets, and means to cut the tape along a marginal line of each sheet.

**MATCH PACKAGE.** N. Hammer, New York, N. Y. U. S. 2,349,093, May 16. In a match package a pivot element, a pair of complementary front and rear cover disks of corresponding diameter, said disks being concentrically mounted to turn about said pivot, a match disk concentrically mounted on said pivot between two cover disks.

**CROWN CAP SELECTING MACHINE.** L. A. Fischer (to The F. & M. Schaefer Brewing Co., Brooklyn, N. Y.). U. S. 2,348,797, May 16. A crown cap selecting machine with rotatable shaft, a casing front having a cap discharging opening rotating with said shaft.

**CARTON.** E. L. Arneson (to Morris Paper Mills, Chicago, Ill.). U. S. 2,349,241, May 23. A carton which comprises a folded, cut and scored blank having a plurality of panels permanently secured together to form a carton body.

**BAG CLOSURE.** P. S. Coghill (to E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.). U. S. 2,349,247, May 23. In a bag containing flowable material the improvement being an elongated closure element fastened to the inner face of the back wall of the bag and projecting from the top of said bag.

**CONTAINER.** D. E. Marshall (to Colgate-Palmolive-Peet Co., Jersey City, N. J.). U. S. 2,349,362, May 23. A carton blank having face and side sections, and flaps and tabs thereon in foldable relation to said sections.

**CHICK SHIPPING BOX.** R. C. Marshall, Jr. (to Crook Paper Box Co., North Kansas City, Mo.). U. S. 2,349,364, May 23. In a shipping box, a tray-like section having a bottom and side walls, each of the latter being provided with a pair of slots, in parallel relation.

**BAG CLOSURE.** W. H. Norseen (to E. I. du Pont de Nemours & Co., Inc., Wilmington, Del.). U. S. 2,349,369, May 23.

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## SIX WEEKS IN SALT WATER

*Yet they'll know the kind of food in every can*

Food is drifted onto the shores of war areas occupied by our troops in the cover of darkness or sunk from lighters in shallow water to be recovered by the fighting forces from the sea. Identifying the contents of the cans was a difficult problem until the resourcefulness of engineers from the Heekin Can Company developed an ingenious coding device that challenges the action of salt water for

weeks. The Heekin Can Company, famous in peace time for its color lithography on metal, has turned all its resources toward helping win the war. Resourcefulness and ingenuity are going to be helpful to you when peace time competition comes again.

THE HEEKIN CAN COMPANY, CINCINNATI, O.

# HEEKIN CANS

*Lithographer*  
WITH HARMONIZED COLORS



A package comprising a heat sealed bag closure device, said device comprising a triangular blank, the blank having edges meeting at right angles and being folded about lines perpendicular to said edges at their mid-points.

**CARTON.** B. S. Harrington (to Armour & Co., Chicago, Ill.). U. S. 2,349,589, May 23. A carton comprising a base face, a pair of triangular ends each having its one edge connected by line of fold with an end edge of said face.

**DISPENSING CONTAINER.** W. A. Becker (to Old Dominion Box Co., Lynchburg, Va.). U. S. 2,349,605, May 23. In a rectangular paper box formed from a single blank and being scored to provide two inner and outer side walls and two inner and outer end walls, each of the walls being provided with tabs which are perforated.

**TUBULAR CONTAINER.** R. Horning (to Oswego Falls Corp., Fulton, N. Y.). U. S. 2,349,730, May 23. A tubular container having side wall formed of a plurality of spirally wound layers of fibrous material adhesively secured together.

**METHOD OF SEALING THE MOUTHS OF BAGS.** S. R. Howard (to Pneumatic Scale Corp., Ltd., Quincy, Mass.). U. S. 2,349,732, May 23. The method of sealing an open-mouthed container which comprises collapsing the mouth of said container by bringing together the side portions thereof adjoined said mouth so as to form a substantially vertical closure, and simultaneously applying a moisture-proof sealing substance to the exterior surfaces.

**PACKAGING HEAVY LEGGED ARTICLES.** H. J. Lacy II and E. C. Slaughter (to U. S. Corrugated Fibre Box Co., Indianapolis, Ind.). U. S. 2,348,483, May 9. A filler and cushion unit for inclusion in a carton with a packaged article comprising two sheets of corrugated paper each folded on an intermediate fold line to form two portions at right angles to each other.

**LIQUID DISPENSER.** L. G. Bates (to Continental Say-When Corp., Cleveland, Ohio). U. S. 2,348,514, May 9. A device adapted to place on a container of liquids, which comprises a closure means, a liquid chamber thereon communicating through the closure means and having an external discharge opening.

**CARTON.** E. A. Throckmorton (to Container Corp. of America, Chicago, Ill.). U. S. 2,349,020, May 16. A carton composed of foldable sheet material for bottles

and the like comprising a parallel piped tubular body adopted to receive a bottle with the top of the bottle at one end and the bottom of the bottle at the other end of the carton body.

**CARTON.** R. Guyer (to Waldorf Paper Products Co., St. Paul, Minn.). U. S. 2,349,088, May 16. A carton comprising a sleeve having lateral walls and open at both the top and the bottom, said sleeve being weakened by perforations at all of the corners thereof, to permit ready severance of the walls thereof.

**END LABELING PROCESS AND APPARATUS.** A. J. Schmidt and J. Jackson (to American Machine & Foundry Co., New Jersey). U. S. 2,349,309, May 23. A process comprising heat sealing overlapped end folds of a package having a wrapper provided with an external fusible coating and thereby rendering tacky the exposed faces of the overlapped end folds, enabling the application of coated labels.

**BAG.** A. Rambold, Dresden, Germany (vested in Alien Property Custodian). U. S. Re: 22,490, May 23. A bag of polygonal cross section made from an integral blank of material.

**CARTON.** H. E. Hines (to Consolidated Paper Co., Monroe, Mich.). U. S. 2,350,232, May 30. For a carton, side wall structure of a strip having terminal overlapping and anchored together adapted to be collapsed and having from one end an endless series of flaps.

**LIPSTICK CONTAINER.** J. Lee (to Scovill Mfg. Co., Waterbury, Conn.). U. S. 2,349,799, May 30. A container for stick material comprising a tubular casing having an open end and an enlarged head at the opposite end providing a transverse shoulder adjacent said tubular casing.

**LIPSTICK CONTAINER.** J. Lee (to Scovill Mfg. Co., Waterbury, Conn.). U. S. 2,349,800. A two-piece container comprising a cupped holder member having a cylindrical wall.

**CARTON.** R. VanRose (to J. Makowsky Corp., New York, N. Y.). U. S. 2,350,262, May 30. A carton formed from a single sheet of material, a front wall having a slot therein, side walls articulated at each end of the front wall with side top walls articulated at the tops of the side walls and extending inwardly and having their front ends inclined inwardly.

**RIP ENVELOPE.** H. I. Nevin, Sr., Anderson, Ind. U. S. 2,350,802, June 6.

In combination with a paper envelope having a folded closure flap integral therewith, an elongated piece of fabric folded longitudinally and having its fold fitted against the inner side of the flap fold, and a line of stitching extending the full length of the flap fold line, so that the fabric and line of stitching may be pulled through the flap fold to rip the envelope open.

**PROVISION OF RIP WIRES IN CANISTERS.** P. Bogner (to Saml. Hanson & Son, Ltd., London, England). U. S. 2,350,870, June 6. A closure for sheet metal containers comprising a sheet metal disc having a marginal flange secured to be lock-seamed to a container body.

**CANISTER PROVIDED WITH RIP-WIRE OPENING DEVICE.** P. Bogner (to Saml. Hanson & Son, Ltd., London, England). U. S. 2,350,871, June 6. A canister comprising a body, an end-closure secured to said body, a fold extending around the canister and including side-walls formed in one of the parts.

**GARMENT BAG.** J. G. Johnston (to The Warren Featherbone Co., Three Oaks, Mich.). U. S. 2,350,901, June 6. A frame for supporting a garment bag and a plurality of hangers within said bag comprising a rectangular wire frame adapted to fit within the upper end of the bag.

**METHOD & MEANS FOR MOLDING AND PACKAGING MOLDABLE PRODUCTS.** R. W. Marshall (to The Ohio Boxboard Co., Rittman, Ohio). U. S. 2,350,912, June 6. In the molding and packaging of cheese and other moldable comestibles, in a plurality of individual components constituting the full package contents the steps of producing a mold having side walls and divided into a plurality of individual component compartments facing in opposite directions, each compartment being provided with a liner, and filling each compartment within its liner with product to be molded.

**CHICK BOX STRUCTURE.** N. F. Schaefer (to Anderson Box Co., Indianapolis, Ind.). U. S. 2,350,932, June 6. A covered, stickless chick box structure including separable box and cover structures.

**FIBROUS COVERED CONTAINER.** L. M. Wiley, Marion, Ind. U. S. 2,350,950, June 6. A covered container structure of molded fibrous material including a container portion having an open mouth defined by a downwardly inclined and outwardly flared rim or skirt of appreciable length and a cover portion provided with a similar downwardly inclined and outwardly flared skirt.

# **CROWN**

## **SYNTHETIC RUBBER LINER**

**FOR CLOSURES**

**holds up under processing  
... will not cut through**

Made in our own rubber mill from Government Reserve Buna-S Synthetic Rubber, these liners have been in commercial use for more than a year. Millions of caps containing these liners have been sold for sealing cold-filled, hot-filled and processed foods with entirely satisfactory results. Further details will be supplied to any glass packer on request.

**CROWN CORK & SEAL COMPANY**

*Closure Division • Baltimore-3 Md.*

**WORLD'S LARGEST MAKERS OF METAL CLOSURES**

It was a little over a year ago, through the friendly cooperation of several good customers, that we made commercial packs and shipments of preserves and fruit butters to test our new Synthetic Rubber lined closures.

After these test packs were made, they were shipped to Baltimore from plants in California, Ohio, Indiana and Virginia by local

freight—and in one instance a distance of two thousand miles in a trailer truck.

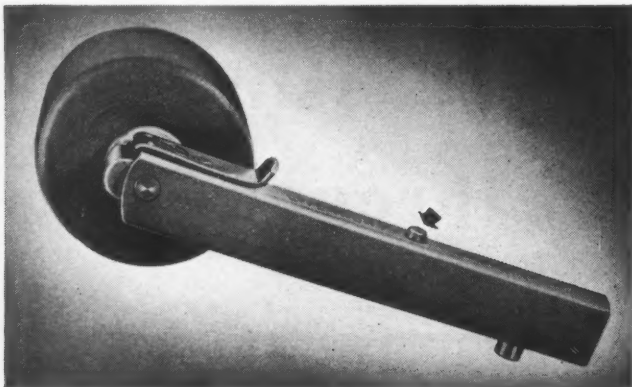
Results were entirely satisfactory at that time but we wanted to make sure that the products would hold up under long storage, so we set aside several cases for observation. Now, a year later, every jar is in A-1 condition and is under vacuum. On the strength of this showing, we

began last October the full-scale commercial production of Crown Slip Rubber Ring lined closures, using Government Reserve Buna-S Synthetic Rubber, compounded in our own mill. Since then, we have sold millions of these caps for sealing cold-filled, hot-filled and processed foods, and again the results have more than justified our expectations.

# Equipment and Materials

## CLOSURE TIGHTENER

Formerly used in the aircraft industry, the Livermont Torq-Stop Wrench has now been adapted for use in applying threaded plastic closures to glass and other types of containers, at the correct tightness thus insuring proper sealing without damage to the closure, gasket or container, the manufacturers state. These wrenches are set at pre-determined torques of from 8 to 750 inch



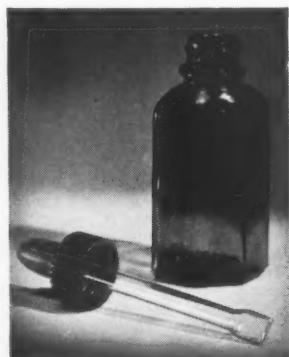
pounds, in accordance with the user's requirements; are sealed at setting and will not vary more than 2% plus or minus, according to the manufacturer, Richmond, Inc., Los Angeles, Calif. The micarta head, built to fit specific size caps is said to operate without marring the material.

Other features of this wrench are audible as well as physical signals when the proper torque load is reached—the audible signal being a distinct "click" while the physical signal is transmitted by a small blunt plunger which taps the operator's palm.

## NEW STRUCTURAL PRODUCT

Produced by surfacing panels of Douglas fir plywood with a plastic laminate, this new material, known as "Inderon," is said to be highly resistant to salt water, terrific strains, corrosive and toxic fumes as well as extreme abrasive action. At present its uses are confined to heavy-duty military applications such as shipping boxes and containers for supplies dropped by parachutes. Now manufactured by Buffalen Lumber & Mfg. Co., Tacoma, Wash., and Washington Veneer Co., Olympia, Wash., it is believed postwar uses will include packaging, prefabrication and furniture manufacturing.

## SPATULA APPLICATOR OUTFIT



A recent innovation in the drug trade is the Spatula Applicator Outfit made by Pennsylvania Glass Products Co., Pittsburgh, Pa. The spade like open end of the glass tube is attached to a rubber part used with dropper fittings, and is so designed as to permit quick and ample application of the medicant to the injury. Available for civilian use after the war, it will find many uses in applications of such preparations as liniments, iodine, mercurochrome, etc.

## NEW MELTING AND DIPPING TANKS

The Youngstown Miller Co., Sandusky, Ohio, offers its ethyl cellulose melting and dipping tank which is said to satisfy requirements set up by the manufacturers and Ordnance for control of this material. Units are available in several sizes with dipping compartments in various dimensions. Model 60, for example, has a capacity of 100 lbs. of plastic per hour. Utilizing indirect heat, thermostatic control is maintained over both the heat exchange medium and the plastic. The plastic material is melted, preheated to proper temperature for dipping before entering the dip tank. Close control and uniformity of temperature are claimed with remarkably low heating surface temperature.

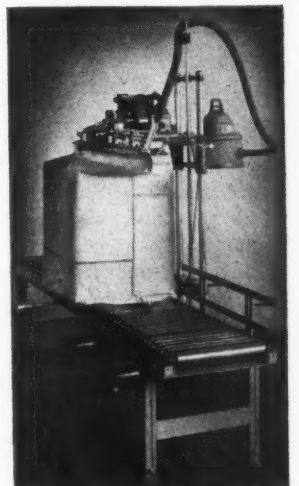
The D. C. Cooper Co., Chicago, also announces its electric heating tanks, equipped with thermostat control, specially designed for heating wax or rust preventatives as well as their jacketed kettle for heating ethyl cellulose compounds. These are all insulated, equipped with drains, available in several sizes—tanks from 5 to 30 gal. and the kettle 10 in. in diameter by 10 in. deep, heat range to 400 deg. F., 1250 watts, 200 volts A.C.

## NEW RESIN ADHESIVE

Durite Plastics, Inc., Philadelphia, Pa., announces Durite S-2987—a thermosetting synthetic bonding agent specifically intended for use in the production of laminates of paper, cloth or glass cloth and for increasing the wet strength of paper. This resin affords a light-colored bond stable to light and, it is claimed, will withstand the three-hour A.S.T.M. boil test.

## HEAT SEALER WITH AIR EXTRACTOR

Push-button control that provides for rapid change from one size bag to another, and any desired type of crimping impression, is the feature of a new automatic bag crimp heat sealer and air extraction unit developed by Amsco Packaging Machinery, Inc. The machine can be changed instantly to handle small cellophane bags or large multiwall bags up to 3 ft. wide and 5 ft. high. The air extractor is attached to the machine for use just prior to the sealing operation. First installation was made at Dodge, Chicago, and standard units of this type are now on the market.



## PORTABLE CONVEYOR

Island Equipment Corp., New York City, has a new type of portable gravity roller-type conveyor. The unit has portable couplings which vary the conveyor to any desired length and permit as much as a 10-degree turn. It is available in 12-, 18- and 24-in. widths, in the standard 10-ft. length.

A revolving accumulating table stores surplus bottles and jars as they come off the conveyor lines, giving the operator time to "catch up." It is of standard conveyor height, 30 in. in diameter, with adjustable ball feet and right- or left-hand feed.



A tiny Bostitch staple . . .  
linking war and civilian production



"BETTER—AND FASTER" . . . as *preparing* turns into *acting* . . . as war presses toward victory . . . as more civilian goods go into production. Faster at almost any cost, to shorten the war . . . faster at *lowest* possible cost, when prices and competition count.

*Lower-cost* fastening . . . better and faster . . . can be expected with Bostitching—fastening metals, plastics, wood, cloth, paper, leather . . . often better and faster than welding, riveting, gluing, taping, nailing, tacking.

Consider Bostitching . . . the advantages of its complete line, with hundreds of models, from powerful metal stitchers to pocket-size stapling machines, to provide the most efficient equipment for any stapling need . . . its engineering facilities backed by over forty years of experience . . . its field force of exclusive stapling specialists.

Inquire about the Bostitch "When-Available" Plan . . . which helps you schedule your equipment NOW . . . and get it when it will fit in with your new production plans. Write today, for "W-A" folder:

Bostitch (Boston Wire Stitcher Company), 74 Blackmore Street, East Greenwich, R. I. (Bostitch-Canada, Ltd., Montreal).

*Below: A Bostitch Box Bottomer. Any girl can easily operate a foot- or motor-powered Bostitch machine.*

**BOSTITCH**

*AND FASTER  
fastens it better, with wire*

ALL TYPES OF STAPLES APPLIED BY MACHINES  
ALL TYPES OF MACHINES FOR APPLYING STAPLES



## NEW IDEAS FROM WAR-TIME PACKAGING

● The strange new shapes of the materiel of war were a challenge to the ingenuity of packaging engineers. How they rose to the challenge by designing new protective containers for oversea shipment is a romantic page in the history of packaging.

The part played by Bostitching in their achievements shows again that *Bostitch fastens it better and faster with wire.*

Among the achievements in which Bostitching was utilized are: packages for plastic noses for bombers . . . forms over which gas masks are fastened for shipment . . . special packaging for auxiliary gas tanks for planes . . . containers for small and medium calibre shells . . . grommets for protecting rotating bands on large calibre shells . . . data cases for bombers . . . and the cartons for the food that fights for freedom on far-flung battle fronts.

Saving of material! That's a plus benefit packaging engineers gained when they chose Bostitching . . . even though they may not have suspected at the time how important it would become. For, Bostitching is a fastening method that permits salvage and re-use of containers.

Here's why. Bostitch bottom-sealing staples and Bostitch Autoclencch top-sealing staples can be removed with little or no damage to the container. A screw driver, pliers or a Bostitch staple remover will do the trick quickly and easily. Put back to work by repeated Bostitching, these salvaged cartons are as strong and secure as the first time they were used.

Bostitching is inexpensive package fastening, too . . . requires no large and expensive equipment for stapling tops and bottoms of corrugated containers. The Bostitch line with its variety of foot-and-motor-operated staplers and power-driven wire stitchers permits selection of the one machine that best fits the particular bottom-sealing requirements. And for top-sealing, all that is needed is a light, portable, hand-operated Bostitch Autoclencch. This remarkable machine applies and closes the staple from the outside . . . no insertion of an anvil required. It's equally useful for bottom-sealing, too.

Packaging engineers now preparing for conversion from wartime packaging to consumer requirements will put their war-learned lessons in Bostitching to good use. And to help them get the most out of Bostitching, they will have the services of experienced field men who specialize in the broad Bostitch line and have a working knowledge of the problems involved in packaging and other fastening applications.

# Plants and People

**Carle C. Conway**, president and chairman of the board of Continental Can Co., Inc., set in motion a comprehensive program for veterans reinstatement recently when he sent a letter to approximately 3,700 employees in the armed services asking them to fill out and return an enclosed questionnaire. The purpose of the questionnaire is to enable veterans' committees in various plants and offices to plan intelligently not only for each veteran's full reinstatement, but, wherever possible, to afford him the kind of employment for which his military training may qualify him.

**George E. Egger**, for years a sales executive for large food concerns, has resigned as vice-president of Harold H. Clapp, Inc.,



George E. Egger

manufacturers of baby foods, to become assistant to J. Louis Reynolds, vice-president of the Reynolds Metals Co. As an official of the Reynolds concern, Mr. Egger will aid in the direction of the company's foil and packaging division which has its headquarters in Richmond, Va. Mr. Egger is a member of the merchandising committee of the Grocery Manufacturers of America and of the OPA and WFA advisory committees of the baby food industry. He is a graduate of the School of Business Administration of Washington University, class of 1925.

**Anchor Hocking Glass Corp.**, Lancaster, Ohio, has acquired the entire capital stock of Carr-Lowrey Glass Co. of Baltimore for a stated consideration of \$3,500,000. This will add a complete line of perfume and cosmetic containers to the parent company.

**The Calco Chemical Division, American Cyanamid Co.**, Bound Brook, N. J., announces the acquisition of the Titanium Dioxide Mfg. facilities of the Virginia Chemical Corp., Piney River, Va., from the Interchemical Corp. This plant now becomes a unit of the pigment dept. of Calco Chemical Div., with J. Allegaert as manager and A. B. Hettrick as resident manager.

**The Champion Paper and Fibre Co.** is celebrating its 50th birthday this year. The company traces its history from one small coating mill with 25 employees to a self-contained paper manufacturing plant employing 6,000 people and capable of turning out 2,000,000 lbs. daily.

**The Grigoleit Co.**, Decatur, Ill., has moved its Chicago office to the Palmolive Bldg., 919 N. Michigan Ave.

**Laurent J. LaBrie** has been appointed technical director of the Chicago and New York City plants of Paisley Products, Inc.

**Peerless Packers Inc.** has announced that the firm name from now on will be simply Peerless Packers.

**Reginald R. Woodhead**, formerly with John A. Manning Paper Co., Inc., as research engineer and sales manager of the paper division is now affiliated with the Stevens-Nelson Paper Corp.

**The American Box Board Co.** has closed negotiations for a new plant to be located in the 51st Street Section of Clearing Industrial District, Inc., Chicago.

**M. Derrico** has been appointed to represent Container Equipment Corp. of Newark in the Chicago territory. He will head the newly opened Chicago office devoting his efforts exclusively to the distribution and servicing of the company's carton sealing equipment.

**Col. Arthur H. Rogow, QMC**, has been appointed director of procurement at the Jersey City Quartermaster Depot, replacing Lt. Col. James V. Demarest, QMC, who has been assigned the post of depot inspector.

**Western Crown Cork & Seal Corp.**, a wholly owned subsidiary of Crown Cork & Seal Co., Inc., has purchased a 33-acre factory site in San Francisco, Calif. After the war the company plans to erect a modern, fireproof building for the manufacture of crown bottle caps and other metal closures for glass containers.

**George E. Kummerow** has been appointed sales manager of the paint and varnish division of Owens-Illinois Can Co. Harvey P. Thelen is the sales manager of the firm's steel container division.

**George F. Kerbey** has been appointed to head the new branch of the Dow Chemical Co.'s fumigant division in the Eastern territory.

**The Bemis Bros. Bag Co.** plant at East Pepperell, Mass., and the McKees Rocks, Pa., plant of Owens-Illinois Can Co. have received the Army-Navy "E."

**Package Machinery Co.**, Springfield, Mass., entertained three Sperry Gyroscope Co. engineers at a dinner recently in appreciation of their cooperation in the company's war production program. George A. Mohlman, president of Package Machinery, presented gold wrist watches to the three men.

**John A. Farmer**, pioneer in the packaging of garden products and fertilizers, died July 9. Mr. Farmer was the founder and manager of the packaged fertilizers division of A. H. Hoffman, Inc., Landisville, Pa., whose packages have won awards in several All-America Package Competitions.

**Henry Willis Phelps**, former chairman of the board of the American Can Co., died July 7 at his home in New York City. He was 80 years old. Mr. Phelps entered the canning business in 1887 with the firm of Ranney & Phelps which merged with the American Can Co. in 1901. He retired in 1941.

Having served the industry for more than 50 years, Mr. Phelps was personally and intimately acquainted with the leaders in the field and was active in its growth. He was endeared by all for his understanding, sympathy and loyalty to the industry.

He was a prime leader in the movement which began many years ago for the scientific laboratory study of food products.



Henry W. Phelps

**Alexander Thomson, Jr.**, vice-president and advertising manager of The Champion Paper and Fibre Co., died at Glendale, Cincinnati, on June 18 as a result of complications from a fever contracted in Cairo while serving with the American Red Cross.

**George W. Reynolds**, chairman of the board and former president of the American Colortype Co. of New Jersey, died on June 13.

**Lt. Col. John J. Toffey, Jr.**, former Cincinnati representative for The Aridor Co., was killed in action on June 3, while leading his troops in action near Rome.

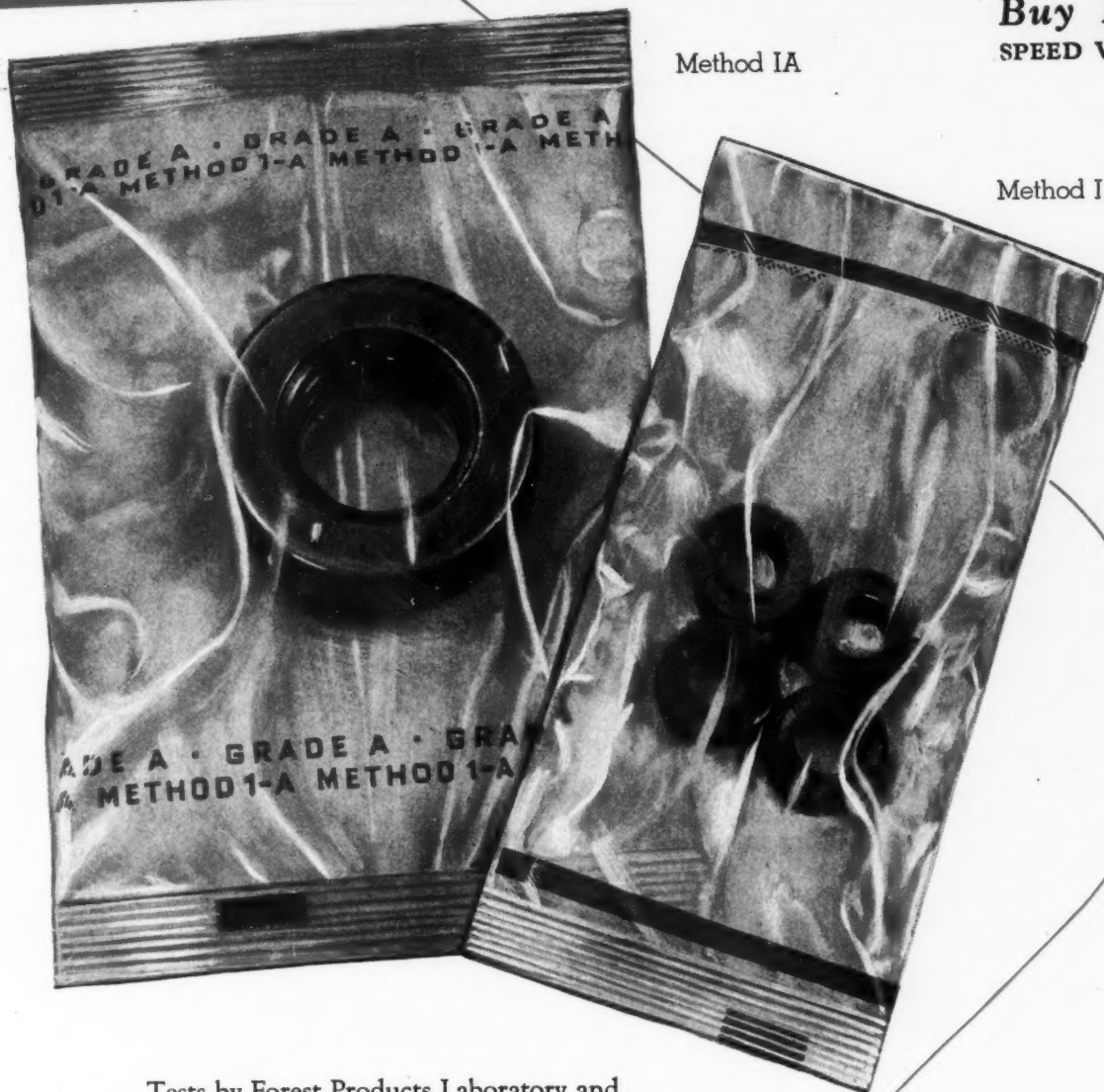


# Recommended for Packaging Military Parts

**Buy Bonds**  
SPEED VICTORY!

Method IA

Method I



Tests by Forest Products Laboratory and  
hard continuous use proves TITE-SEAL Waterproof

Cellophane Bags perfect for packaging military parts. Approved Grade A, type III  
wrapping material in packaging Methods I and IA. Waterproof and airtight, military  
parts and supplies reach fighting fronts in TITE-SEAL Bags free from rust, dust and  
corrosion. Contents completely visible.

Delicate or fragile articles nested in our protective LOXTITE Partitions and the  
container heat-sealed in one of our TITE-SEAL Bags is THE packaging method  
many are seeking. Whatever your needs let us aid you. Write today.

**NOW! METHOD II  
PACKAGING  
MATERIAL**



LOXTITE PROTECTIVE PARTITIONS • "VICTORY" WRAP  
• PRINTED CELLOPHANE BAGS, ALSO WRAPPERS  
IN SHEETS OR ROLLS • "TITE-SEAL" LINERS  
Patents Applied For

★ RECOMMENDED after tests by Forest Products Laboratory

## TRAVER CORPORATION

Dept. MP8, 358-368 West Ontario Street, Chicago 10, Illinois



# For Your Information

**The Exhibitors' Advisory Committee of the Packaging Exposition** has set the date for the 1945 Exposition. It is to be held in the Hotel Astor, New York, April 17 to 20, inclusive. Space will be available on a priority basis—the companies having exhibited the greatest number of times will have first choice and this policy will extend progressively down the line.

**Reflecting widespread interest in the war and postwar question of proper packaging for air cargo**, more than 500 persons from 19 states attended the first National Air Cargo Packaging Forum, sponsored by the Aviation Section of the New York Board of Trade, in the Hotel Pennsylvania, New York, June 23. It was the first of a series of meetings to be sponsored by this group.

The program included exhibits, a luncheon and a question-and-answer forum. Principal speaker was Brig. Gen. J. M. Clark, commanding general of the Middletown Air Service Command, who disclosed some of the Army's accomplishments in re-packaging for light-weight air shipment. Short talks were given by the panel leaders—J. D. Malcolmson, of the Robert Gair Co. and WPB; Louis de Garmo, consultant on package styling and display; George F. Bauer, air commerce consultant, and Ida Bailey Allen, home economist of Parade magazine.

**Surveys of the drug and chemical industries and of the toys, games and novelties business** compiled for the postwar planning committee of the National Paper Box Manufacturers Assn. predict a more general use of concentrated insecticides and chemical fertilizers in package form and a huge demand for "substantial" toys and games for a five-year period after the war. The drug survey further revealed that there will be a strong demand for set-up, folding and corrugated boxes for new chemicals, pharmaceuticals, drugs, health appliances, plastics and germicides and insecticides. Many manufacturers questioned reported substitute containers now in use, but the majority said such containers probably would not be used permanently.

**The second wartime edition of The Milwaukee Journal Consumer Analysis** of the greater Milwaukee market is off the presses. In this 102-page report are the answers to such questions as "What do housewives know about grade labeling?" "What about canned meats?" "What are the trends in purchasing of canned fruits—meats—vegetables—fruit juices?" "What about dry soup mixes?" and many other questions of special interest to packagers.

**"Adjustment of Production 'Cut-backs'"** is the title of a booklet issued by the Army Services Forces which describes the procedure for the implementation of changes in its program. The booklet has been designed as an aid to war contractors in making adjustments necessitated by cancellations and production "cut-backs."

**Any lag in the reconversion of the paint industry in the postwar era** will be occasioned, in part, by a lack of containers according to a bulletin issued by the Postwar Planning Committee of the National Paint, Varnish and Lacquer Assn.

**A positive approach to the subject of grade labeling** was advocated by Happer Payne, director of labeling for the National Canners Assn., before the mid-year conference of the Grocery Manufacturers of America at the Waldorf-Astoria, New York, June 15. "We argue with grade-labeling advocates," Mr. Payne said, "as to whether such labels will or will not destroy brand names and impair quality, besides stifling progress and improvement. In other words, ours is the negative side and we oppose mandatory grade labeling. That in itself puts us in a position where we are open to the charge of being reactionary and obstructionist." He urged instead that canners become known as advocates of a program of adequate descriptive labeling.

Clarence Francis, chairman of the board of General Foods Corp., told the luncheon meeting the war was revolutionizing formerly accepted packaging ideas in the food field. He declared that in such new wartime developments as have taken place in quick-freezing and dehydration, "we have businesses that are not inhibited by a lot of old prejudices."

**An eight-page bulletin, published by the Union Special Machine Co.**, describes the Dubl-Tape closure produced on small paper bags by the Union Special 60000 C sewing head. Complete data are given concerning the formation of the closure, the sewing head which produces it and conveyor, tables and columns available in conjunction with it. Copies of the bulletin, No. 100, are available from the manufacturer, 400 N. Franklin St., Chicago.

**A new booklet for anyone using adhesives or coating materials**, impregnators, spray-on insulators and sound-deadening compounds is the one entitled "3-M Adhesive Data." It lists the various formulas as made by Minnesota Mining & Manufacturing Co., adhesive division, and shows the viscosity, bonding range, method of application, etc. This booklet is available upon request from the manufacturer, St. Paul 6, Minnesota.

**The chemical division of The B. F. Goodrich Co.** has issued a technical booklet on its GEON vinyl resins and plastics for calender and solution processing. The bulletin describes the vinyl chloride polymers and copolymers, in resin as well as plastic form, gives plasticizer and stabilizer tables for use in combination with the resins, discusses fillers and pigments and lists typical formulations for the calender, spread or dip processes. The bulletin is available upon request.

**Large-scale expansion of pre-packaging of meats, fruits and vegetables in consumer sizes** was forecast at the Chicago convention of the Super Market Institute June 18-21. Speakers in a panel discussion said that experiments in self-service marketing of pre-packaged meats had shown that the practice eliminated congestion at meat counters, improved net profit and facilitated movement of slower cuts. Among the problems encountered, it was said, were those of pilferage and the need for heat-sealing of cellophane and other containers to prevent leakage and soiling of customers' clothing. It was agreed that easing of the packaging and manpower situations will see immediate further expansion.

**The 1944 edition of the Source of Supply Directory** is off the presses. Price, \$2.00, Howard Publishing Co., 2009 Conway Bldg., Chicago 2.

**An "Adhesive Problem Data Sheet"** in the form of a questionnaire has been published by Paisley Products, Inc., in order to analyze properly the various adhesive problems of industrial plants and war contractors. Copies may be had by writing the company at 1770 Canalport Ave., Chicago 16.

**Impulse sales, with greater emphasis on packaging and display**, was the main theme of a talk made by M. C. Pollock of the cellophane division of E. I. du Pont de Nemours & Co., Inc., before the packaging forum of the National Assn. of Display Industries at the Hotel Pennsylvania on June 29. According to scientific studies, "85% of all buying is done through the eyes," said Mr. Pollock, and he further claimed that this could be developed into an important, postwar vehicle for lowering retail operating costs through the medium of self-service. He went on to say that in order to design postwar packages it has been necessary to consider the trends of self-service, informative labeling convenience, protection, impulse buying and visibility. Packaging which takes these factors into account protects the merchant against markdowns resulting from shop wear and soilage.

# NEW HEAT SEALER WITH PUSH BUTTON SIZE ADJUSTMENT . . .

makes the AMSCO HI-SPEED ROTARY HEAT SEALER particularly adaptable to ordnance, aircraft and other parts-packaging plants. Instantaneous automatic adjustment from one size to another insures high speed production on limited runs. Just push a button to raise or lower unit.

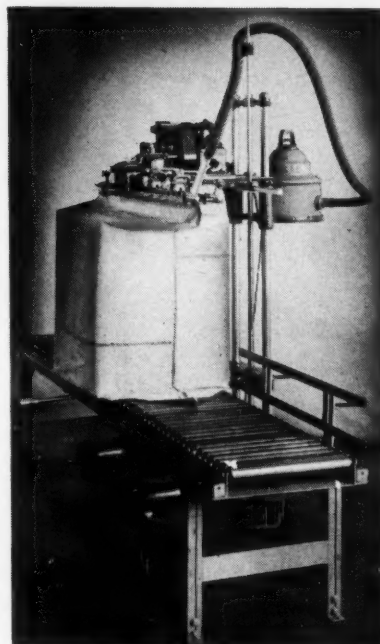
Now operating in many ordnance plants throughout the country, the AMSCO machine gives an extra margin of speed, converting former slow operation and bottleneck to the fastest part of the production line.

Engineering Details: Portable with extremely large range. 450 linear inches of perfect moistureproof heat-seal per minute—faster than other operations on packaging lines; easy operation reduces operator fatigue; air extraction from package before sealing helps avoid oxidation. Maximum production with a minimum of space and labor.

Our engineers will be glad to give you complete details.

## AMSCO Machines Package:

explosives	tank and truck
sulfa drugs	parts
emergency	batteries
rations	tobacco
fruit bars	blood plasma
cocoa	photo supplies
salt and sugar	rivets and small
dehydrated	assemblies
foods	



**AMSCO PACKAGING MACHINERY, Inc.**  
31-31 Forty-Eighth Ave. Stillwell 4-4840 Long Island City 1, N. Y.

Look us up at the National Food  
Distributors' Show—Hotel Sherman  
Chicago—August 16-19

that creative touch

....LAST WORD IN "ON THE PACKAGE"  
PRINTING SENDS HELENA RUBINSTEIN'S  
"HEAVEN SENT" OUT INTO THE WORLD  
SELF-ASSURED AND LOVELY IN ITS  
PERFECTION.

SILK SCREEN PRINTERS TO THE COSMETIC FIELD  
**CREATIVE PRINTMAKERS GROUP**  
14 WEST 17 STREET • CHELSEA 3-6803-4-5

## Time Wisened

**TIME WISENED**, the many users of ON-TO-STA Gummed Tapes are faithful customers. The Recognized Durability and extra Sticking Qualities of ON-TO-STA gives them assured shipping protection.

**LITTLE WONDER** then that they stick to ON-TO-STA products. Once Discovered, you'd Stick Too!

Join our group of satisfied customers.

**Select Your Gummed  
Tapes and Specialties  
from Our Complete Line**

**ATLANTIC GUMMED PAPER CORP.**

PLANT & MAIN OFFICE: ONE MAIN ST., BROOKLYN 1, N. Y.

Branch Offices: Philadelphia, Pittsburgh, Chicago,  
Buffalo, Atlanta, Los Angeles, Havana.

# Are YOU Doing Your Share, Mister?



Hats off to the Boy Scouts of America — they are setting an example for all of us in the Waste Paper Drive. Let's all do our share, too — get out and get every bit of waste paper in for the war effort.



OTSEGO, MICHIGAN PHONE KALAMAZOO 5500  
CHICAGO, 228 N. LaSALLE PHONE CENTRAL 1798

## Pre-packaging—

(Continued from page 75) pot. Housewives like to buy foods that are ready to cook.

The average store today is a combination of a merchandising establishment and a processing plant. It is a processing plant in so far as it cuts, weighs, packages or otherwise processes foods. It may be a good merchandising establishment, but is a very poor processing plant. Having sales clerks to cut, weigh and wrap is like having a force of office workers to work in a production plant for a few minutes and then stop to record the details of manufacture.

One of the advantages that the chain store has had over the independent store lies in the fact that the manager of a chain does not have to spend a lot of time on some of the details which an independent merchant is forced to take care of, and thus the chain store manager has more time for merchandising. It is very obvious that the independent merchant will be a far better merchant if he can eliminate the time required for supervision in the cutting up of meat, the trimming and sorting of fruits and vegetables and in the saving of paper, string, etc. He can give the time saved to a study of merchandising methods.

Will pre-packaging be done by the packers, the commission merchants, growers or producers? I think the correct answer is that, in the initial stage, every part of the chain between the producers and the consumer will do a part of this pre-packaging. Some retail stores will set up a central processing plant in which machinery will be utilized to pre-package economically, but the most practical place to have the job done is as near the source of the product as is possible and eventually it will come to this, but the speed with which this phase will be reached will be determined by the pressure which merchants apply to their suppliers.

It is my opinion that no matter how small a store may be, it may start a pre-packaging operation in its back room. This pre-packaging can be done by hand, for there is not an item that has been mentioned that has not been successfully and economically packaged by hand.

Naturally, one of the big advantages which pre-packaged merchandise offers is that it lends itself to self-service, but it is not true that only a self-service store will find it economical and desirable to have all merchandise pre-packaged. The small store has no problem in handling canned goods, pre-packaged bacon or pre-packaged cheese, butter, etc. The self-service store, large or small, and also the semi-self-service and service stores, large or small, will gain exactly the same advantages.

## Canned fuzes

(Continued from page 83) tion of the can opening tab which allows for quick and easy opening in the field.

The final assembly operations on the fuzes are done on a carousel type of conveyor, and at the proper point on this conveyor, the cans, as mentioned above, are fed into the line. The fuzes are then placed in the cans and the packing components are put in position. The conveyor passes in front of an operator who seals the cans (Fig. 4) on a semi-automatic closing machine. The operator then loads the sealed cans into a wooden box which holds 25 cans.

After the wooden box is filled, it goes by roller conveyor to another operator who puts on the lid with screws and an air-powered screwdriver and the package is ready to ship.

Credit: Cans by American Can Co., New York City.



# Colorful Labels

automatically heat-sealed to your packages at low cost

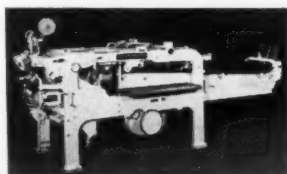


Thermoplastic Roll-Type Labels are used with the "Oliver" Automatic Labeller which can be attached to most types of wrapping machines. It is also offered as part of special machines designed for labelling and coding only.

**NOW** you can simplify production, save time and dollars in your wrapping department by using this new "Oliver" Labelling System. Labels in rolls are easy to stock, easy to handle, and can be changed without fuss or waste.

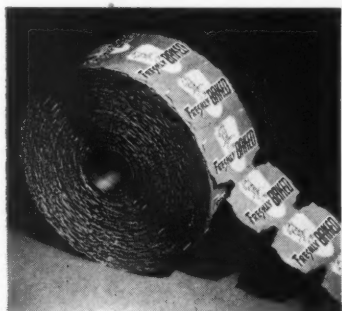
"Oliver" Thermoplastic Labels are heat-sealed, avoiding the use of liquid glues and constant cleaning. The diecut labels, attached end to end, are separated just before application. One label at a time is accurately sealed to the wrapper.

"Oliver" Labels—printed in one, two or three colors—are designed by our own artists and produced in our modern printing plant. Let us show you what they can do for your packages.



"OLIVER" AUTOMATIC VARIETY WRAPPER

... one of the machines equipped with the "Oliver" Automatic Roll-Type Labeller. Also has Automatic Label Coder. This machine neatly overwraps small and large cartons, and irregular-shaped items on U-boards or flat cards. Has exceptionally wide range. Makes an extra strong seal. Quickly adjusted. A girl can operate the "Oliver."



Write for all the facts. Ask for sample collection of labels M-8.

PACKAGING DIVISION  
OLIVER MACHINERY CO. • GRAND RAPIDS, MICH.

**YOUR LABELS WILL SURVIVE THIS VOYAGE**



IF THEY'RE PRINTED ON  
**SOLSEAL**  
GUMMED LABEL

**For labeling** overseas packages... or a waterproof label is required... your customers will prefer the new SOLSEAL Gummed Label paper.

This paper, 60# Kraft, is water resistant and will withstand moisture, heavy humidity... even actual immersion in water. It adheres well to glass and some metals, as well as to fiberboard containers. Solseal Solvent, a special non-inflammable, non-volatile, non-corrosive mixture of chemicals, acts as the moistening agent. Write at once for complete details about this valuable new label paper.

**McLAURIN-JONES CO.**  
BROOKFIELD, MASS.

Offices: New York • Chicago • Los Angeles

**SOLSEAL** is a new member of the well-known McLaurin-Jones line of Guaranteed Flat Gummed Papers



## PUT ADHESIVES IN YOUR POST-WAR PLANS

**B**ecause there have been many improvements in adhesives—and many new developments in their application—you will want to review your adhesives requirements, when making your post-war plans. Considerable laboratory research may be necessary to determine *the one best adhesive* for each contemplated peace-time application. This research requires time. It should be undertaken now.

Arabol urges you to submit your post-war plans for full analysis and research. Arabol Service Engineers are available for confidential consultation, without cost or obligation. They will apply to your

*Arabol V Case Sealing Adhesives meet Government specifications for all overseas shipments. They are fast setting... hand or machine quality.*

problem the experience gained from developing more than 10,000 industrial adhesives formulae during 59 years—1500 in the two war years alone. When writing, please address Dept. 89.

### THE ARABOL MANUFACTURING CO.

PIONEERING SINCE 1885

Executive Offices:

110 East 42nd St., New York 17, N. Y.

Offices and Factories:

BROOKLYN · CHICAGO · SAN FRANCISCO

Branches in Principal Cities



## Adhesives?.. ARABOL!

## Unit packaging

(Continued from page 82) therefore the repeat, all-over design is most feasible. As previously stated, the machine will affix a label, if a separate label is required, instead of trade identification printed directly on the rolls of sheeting.

The construction of each package is also designed to fit the particular product. Crimping may be diagonal, diamond or ring type depending upon the physical characteristics of the products to be packed. Cross crimping is said to insure a uniform seal on all four sides of the package, regardless of the grain of the material. It is done in a single operation with heating units of exactly the same temperature and pressure on all four sides so that the package is securely closed.

Basic structure of all the packages is strengthened by rounded corners which preclude any difficulty in completely emptying the package, prevent the material from wedging in the corners, causing an outward strain against the sealing edges of the package.

Specially designed tearing notches insure easy opening, so that the consumer can get at the contents quickly, even though the package is made of tough materials.

To provide a clean powderproof closure, some of the packages have a special closure that produces a bonding seal on both the front and back side of the transparent side of a package where opaque and transparent materials meet. Thus the border seal has the same clean appearance on all four sides and a doubly reinforced seal on the filling closure.

Consumer convenience may be greatly increased by novel pouring spouts or extruding nozzle for dispensing cream, ointment, liquids, powders and tablets. This is achieved by the impression of the crimping and sealing device, which leaves such openings. These spouts may be placed at one end or both. When there is one at both ends, the consumer does not have to turn the package to dispense the contents.

As was stated earlier in this article most of this development, except for essential purposes, will have to wait until after the war. But even now many companies are making their plans. Those who have products adaptable to this type of packaging should begin to study these problems today.

*Credit: This article is based on machinery created and manufactured by the Ivers Lee Co., Newark, N. J., and the types of packages illustrated were devised by that company.*

## Castoria comes back

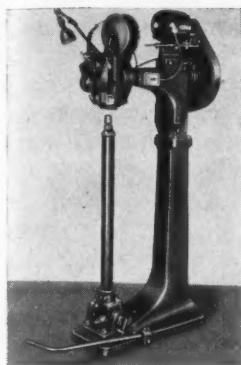
(Continued from page 87) appears on the dozen-lot wrapper and on the shipping case, making it easy to locate any desired batch even after the packaged product has been stacked in a warehouse.

Introduction of the new package is being accompanied by an extensive advertising campaign, appearing in every daily newspaper in the country, stressing the new design and its control-number feature.

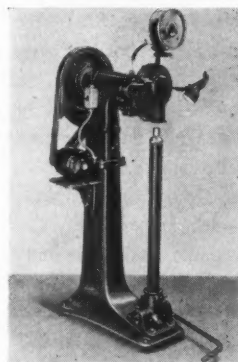
*Credit: Cartons, Fort Orange Paper Co., Castleton-on-Hudson, N. Y.; bottles, Pierce Glass Co., Port Allegany, Pa.; labels, Rode & Brand, New York City; dozen-lot wrappers, Richard Bauer & Co., New York City; corrugated containers, Agar Division, International Paper Co., Whippany, N. J.*

*Bottle cleaner, filler, capper and labeler, Pneumatic Scale Corp., North Quincy, Mass.; carton-loading machine and bander, F. B. Redington Co., Chicago; bundler, Package Machinery Co., Springfield, Mass.; shipping carton sealer, Standard-Knapp Corp., Portland, Conn.*

# Wire Stitched Shipping Containers Best Protect Your Goods in Transit or in Storage



**Bliss Heavy Duty Bottom Stitcher**



**Latham Bottom Stitcher**

Regular Slotted Containers with bottoms wire stitched are widely recognized as the strongest, most rigid and dependable containers available. Wire stitching utilizes the entire strength of the board and is unaffected by moisture conditions in storage or transit.

For your stitching equipment, it will pay you to investigate the machines illustrated here, before you buy.

**THE BLISS HEAVY DUTY BOTTOM STITCHER** is recommended for heavy duty, high speed, continuous production. Favorably known as the fastest, strongest, most durable and dependable Bottom Stitcher built.

**IMPROVED LATHAM BOTTOM STITCHER** is a moderate priced machine, recommended for stitching the lighter grades of corrugated and solid fibre containers, in all the usual sizes which do not require the heaviest kind of stitching. Has many features heretofore found only in the highest priced machines.

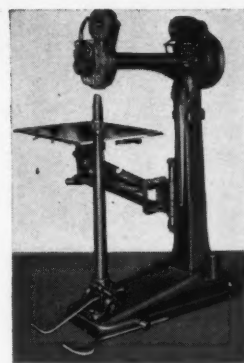
**THE BLISS TOP AND BOTTOM STITCHER.** Some products must now be shipped in completely wire stitched containers. This stitcher is recommended for plants or departments where one machine will handle the quantity of bottom and top stitching needed. Quickly changed for bottom or top stitching. Counterbalanced table for easy raising and lowering.

**FOR STITCHING FILLED BAGS,** the Boston Portable Bench Stitcher has been found practical and convenient, as it can be readily moved to the work to be stitched. Operates from light socket—solenoid operated foot pedal.

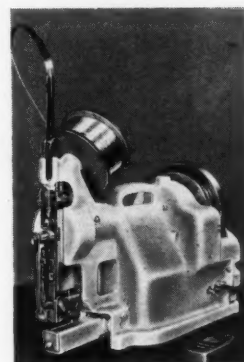
ASK FOR LITERATURE ON ANY OF THESE MACHINES

**DEXTER FOLDER COMPANY**

330 West 42nd Street, New York  
Chicago—Boston—Philadelphia—Cincinnati



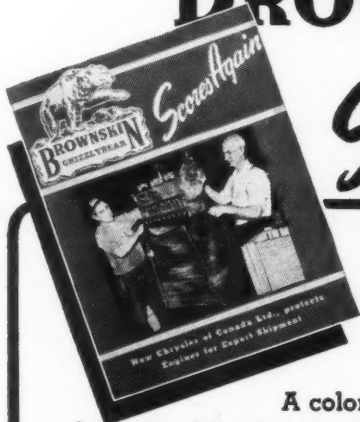
**Bliss Top and Bottom Stitcher**



**Boston Portable Small Bag Stitcher**

## BROWNSKIN

### Scores Again!



A colorful folder showing how the Chrysler Corporation of Canada Ltd., protects their engines for export shipping has now been prepared. It tells the story of their use of A-19 Brownskin Grizzlybear to lick the problem of corrosion on overseas shipments.

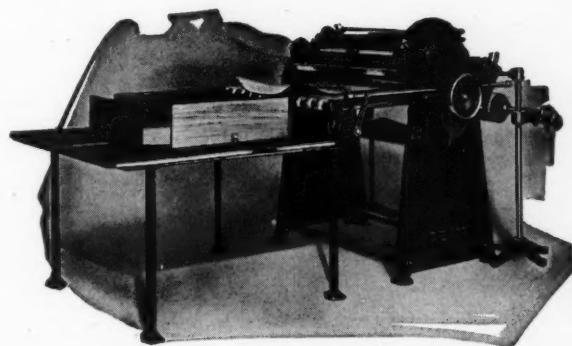
Write today for your free copy of Folder BMP



**ANGIER CORPORATION**

CORROSION PREVENTIVE AND WATERPROOF PAPERS  
FRAMINGHAM, MASSACHUSETTS

Many Great Nations Are Already Planning Post War Programs as are also many business men—ARE YOU?



**THE BECK SHEETER**

After "Unconditional Surrender" is a fact of history, you will want the highest productive Sheeting equipment obtainable, to meet competition. Your choice may be from the hi-speed Electric Eye machines for "spot sheeting" down to the more simple standard machines for plain work.

Write us to-day for to-morrow.

**CHARLES BECK MACHINE CO.**

13th & Callowhill Streets

Philadelphia, Pa.





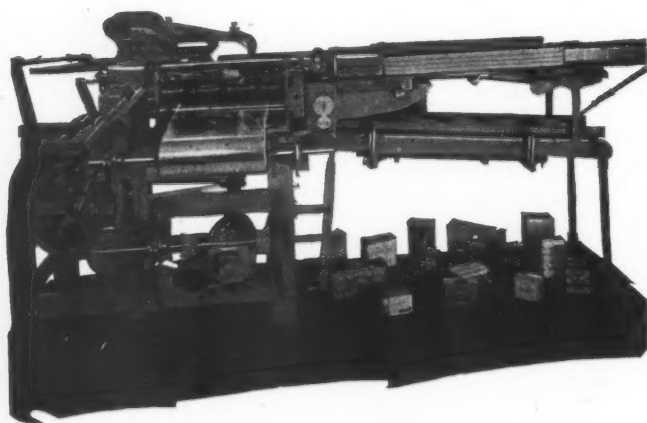
Wherever your packages are sold, they are on parade. To make a good impression, the overwraps should look neat and trim. Sharp creases and strong seals are the order of the day. Your prospective purchasers, like all parade spectators, are quick to applaud the fine points; but they do not hesitate to make disparaging remarks about those features that do not come up to expectations. If your wrapping is just average, it is advisable to check over your equipment now . . . for, after the war, the demand for new machines will be so great that a long wait may prove to be a serious handicap in meeting competition. For further information, write the factory. Your inquiry will receive prompt attention.

HAYSSSEN MFG. CO. SHEBOYGAN, WIS.

• BUY AND KEEP WAR BONDS •

## HAYSSSEN WRAPPING MACHINES

• • ELECTRONIC-CONTROLLED • •



## Self-selection for records

(Continued from page 108) listening facilities must be provided for self-service departments and the dealer must watch the number of customers in his department to provide ample booths for peak periods. Four-by-five-foot booths were adequate—some posts were equipped with earphones.

Recommendations for good store layouts (Fig. 7) were suggested (1) to make it easier for the customer to enter the department and to pass from one section to another; (2) to permit the customer to pay for his purchases quickly and conveniently; (3) to make the store as attractive and pleasing as possible. RCA's plan suggests model layouts to accomplish these objectives and recommends that store operators make similar layouts when planning their departments.

Also outlined by RCA is a system of inventory control (Fig. 8) by the use of stock envelopes to contain single records while in stock, album markers—colored cardboard strips to be placed in albums for proper identification; stock control ledger in which may be kept a daily record of sales, receipts, orders and current inventory.

Signs saying, "Please do not return records to racks—Place them on Table in Front of Booth," have helped to prevent records going back into the wrong display racks.

Increased emphasis for the selection department is placed on the value of this method in point-of-sale advertising. Customers' attention can be called quickly to new releases in the racks, current promotions, seasonal displays, manufacturer's advertising, tie-ins with musical shows and artists appearing locally, music reviews in national and local publications (Figs. 9 and 10).

## Lamination—

(Continued from page 122) the scope and complexity of the subject to a generalized presentation. The "know-how" of lamination work rests entirely on a thorough knowledge of the materials that come into play and in the detailed design and control of the laminating equipment and process.

### Corrections

Due to an engraver's error, the cut on page 119 of the June issue, in the article "Noreseal—a New Cork Substitute," was made in reverse, and the identification of the three types of crown liners was therefore erroneous. As printed, the cut shows: left, composition cork; center, poured Noreseal, and right Noreseal sheet.

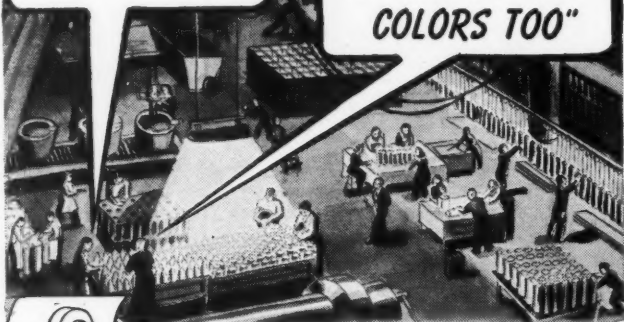
Photographs of the can pro-coating installation at the Polk Co., Tampa, Fla., appearing in the "Meeting New QMC Food Label Specs" article in the May issue on pages 92 and 93, were supplied through the courtesy of the General Industrial Finishes Division of General Printing Corp., New York, manufacturers of the coating used. We regret that credit was inadvertently omitted.

On page 100 of the May issue, the second paragraph of item no. 4 should have read—"The case, which weighs about 10 lbs. (each half measuring 5 in. deep and 10 in. square), is held together by a spring hinge."

We regret that credit was given to the Acme Folding Box Co., St. Louis, Mo., for the box for "Yankee Perfume Starch" appearing on page 90 of the June issue instead of to Acme Folding Box Co., Inc., New York.

"LOOK JOE,  
NEW PRINTED,  
TAPE FOR  
DECALS!"

"YEAH, IT LABELS  
AND SEALS IN  
ONE OPERATION  
AND COMES IN  
COLORS TOO"



TRANSPARENT  
TAPES



SINGLE AND  
MULTI-COLORED  
TAPES



MASKING  
TAPES



PRINTED  
TAPES



CUSHIONED RIVETING  
TAPES



IDENTIFYING  
TAPES



ELECTRICAL  
TAPES



LUMINOUS  
TAPES

ACETATE FIBRE  
TAPES

Something new in pressure seal-  
ing tapes. Filmonize printed  
tape in a complete color range,  
one, two or three colors *on one*  
*roll*—now used in war plants for  
identification because the colors  
won't fade and the printing can't  
rub off—for labeling and sealing  
in one operation because that  
saves time and production cost  
— in place of decals because Fil-  
monize goes on ten times faster  
than decals and lasts forever.  
Place a trial order with your dis-  
tributor and let your experience  
prove, *you've never had as good*  
*a tape.*

### Filmonize Sets New Standards

- Easy to use . . . strips cleanly  
off the roll.
- No "curl-back" . . . no  
tangle . . . no waste.
- Fade-proof colors . . . print-  
ing sealed in.
- Widths from 1/2" to 18"  
throughout the Filmonize  
line.



**Filmonize**

TRADE MARK REG.

SELF-SEALING TAPES

**INTERNATIONAL PLASTIC  
CORPORATION** MORRISTOWN, N. J.

## WHEN a little MEANS a lot!

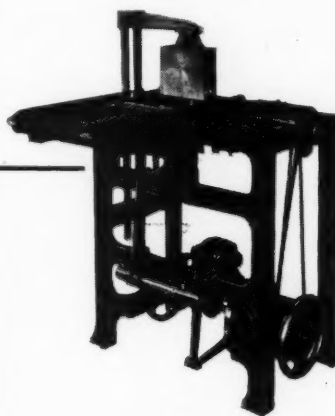
Today any little "extra" service derived from your equipment goes a long way towards solving unlimited present-day difficulties and problems.

Little wonder therefore why manufacturers with PETERS Packaging Machines are realizing so much additional satisfaction from their equipment today.

Little "extra" features incorporated in these PETERS pack-aging units originally designed for peacetime production are de-livering unusually desirable results under wartime conditions in terms of maximum package units handled with highest conservation of material, time and labor.

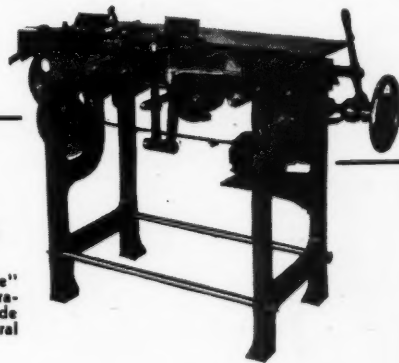
Performance of such high character speaks for itself. It estab-lishes a definite preference in users' minds for this equipment when replacements or additional installations are needed.

Interested potential users are advised to write NOW regarding an installation when this equipment is again generally available. Send a sample of each size carton you desire to handle to enable us to recommend equipment to meet requirements.



PETERS  
JUNIOR CARTON  
FORMING AND  
LINING MACHINE

Sets up 35-40 "Peters Style"  
cartons per minute. Requires  
one operator. Can be made  
adjustable for several carton  
sizes.



PETERS  
JUNIOR CARTON  
FOLDING AND  
CLOSING MACHINE

Closes 35-40 "Peters Style"  
cartons per minute. No opera-  
tor required. Can be made  
adjustable also for several  
carton sizes.

**PETERS MACHINERY COMPANY**  
GENERAL OFFICE AND FACTORY  
4700 RAVENSWOOD AVENUE, CHICAGO, ILL.

**S&S MACHINES**  
help fill war contracts

***Faster!***



**Speeds to suit  
your Needs...**  
**15-30-60-120**  
**per minute!**

S & S collaboration with leading packers has solved some of the toughest packaging problems of this war... has been a short-cut to speedy economical packaging in packages that really protect!

If you have a problem in wartime packaging—call in S & S! Ask us about converting your present machines to wartime needs... or, if your product is a high rated war essential, ask about the new S&S machine for its rapid, low-cost packaging. Use this service freely; there's no obligation!

**"Better Machines for Better Packages"**



**STOKES & SMITH CO**

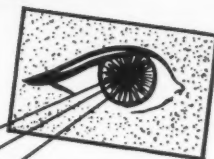
**FILLING-  
PACKAGING-  
WRAPPING  
MACHINES**

Frankford

Philadelphia 24, Penna.



**POST-WAR  
SUGGESTION**



**THE EYES HAVE IT  
WHEN YOU PACKAGE  
YOUR PRODUCT  
IN LUSTEROID**

More customers say "I'll take it," when they see your product encased in crystal-clear LUSTEROID vials and tubes.

Eye appeal and product visibility are only two of the many advantages provided by these modern plastic containers.

They are feather-light, yet strong, rigid and unbreakable. No protective partitioning or special packing are required. There are no labels to affix because your sales message can be printed as an integral part of the container. Shipping and handling costs are reduced materially. And a wide choice of colors, clear or opaque, provide free reign for package design.

Diameters from 1/4" to 1 1/4" and lengths up to 6". Cork, slip-on or screw-cap closures.

*Write for post-war details*

**LUSTEROID CONTAINER CO., INC.**

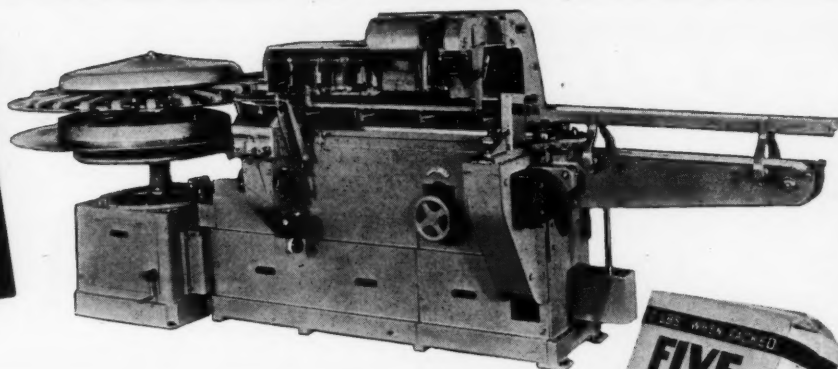
Formerly Lusteroid Division of Sillicocks-Miller Company

Office and Factory

10 W PARKER AVENUE, MAPLEWOOD, N. J.  
MAILING ADDRESS: SOUTH ORANGE, N. J.



# SEALTITE



## *Seals* **BAG PACKAGES** **FASTER with LESS HELP**



SEALTITE Bag Sealers pay dividends any time in increased production and reduced labor costs but right now the savings are greater than ever. SEALTITE seals any standard 2 to 10 lb. bag faster and with less help than it can be sealed by other methods.

The SEALTITE package is well settled and nicely square at top, bottom and sides. A most

attractive package, it can be stacked like a carton for display purposes.

Since SEALTITE packages are sift-proof, they are ideal for sugar, salt, flour, coffee and similar commodities.

Write for complete information on this better way to close paper bags.

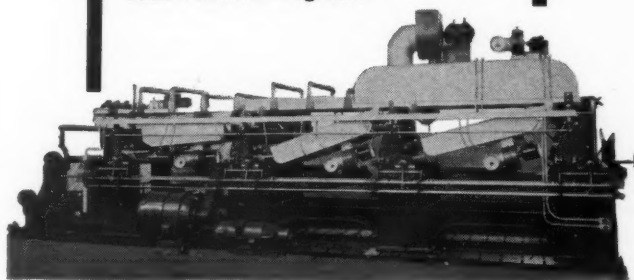


**CONSOLIDATED PACKAGING MACHINERY CORP.**  
BUFFALO, N. Y.

### THIS **HYROTO**

MODEL C-30

Rotogravure Printing Press prints four colors in register.



... on many materials which come in rolls up to 30 inches wide. Special HYROTO machines are designed in any size to print any number of colors. There are HYRTOS for laminating, coating, sheeting, scoring, die-cutting. The know-how in rotogravure production, over 30 years pioneering experience in inks, printing, cylinders, plates, production, are behind each HYROTO machine. Ask the men who operate them.\*

**ROTOGRAVURE ENGINEERING CO.**  
299 Marginal Street . East Boston 28, Mass.

\* Names on request.

## *Let Us Solve Your Packaging Problems*



Labels • Box Wraps

Packets • Cartons • Folding Boxes  
Merchandise Envelopes and Cards

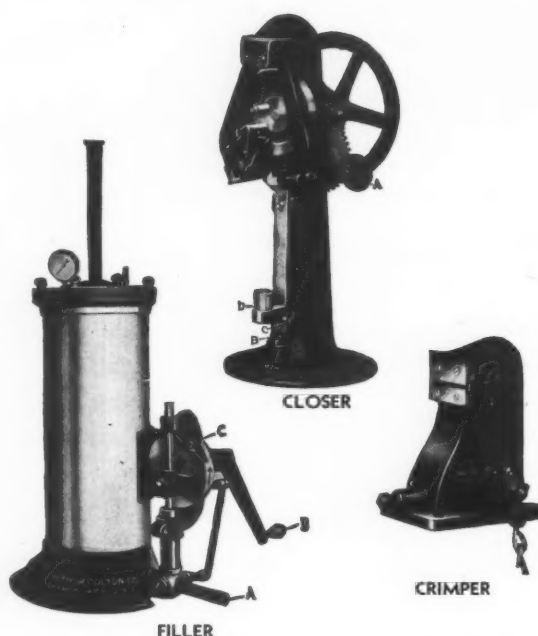
**STECHER-TRAUNG**

LITHOGRAPH CORPORATION

ROCHESTER 7, N.Y. SAN FRANCISCO 11, CALIF.

Offices in Principal Cities

# Colton HAND OPERATED MACHINES



Will seal tubes with Colton Clipless Closure or for applying clips



Will be pleased to recommend machines suited for your requirements—write

**ARTHUR COLTON CO.**

2602 EAST JEFFERSON AVE., DETROIT, MICHIGAN



**yes...**  
there will be  
a *Change!*

Paper products designed for war emergencies will undoubtedly be generally adopted for post-war use.

Our research department is cognizant of this fact and we will have new paper converting equipment to meet these problems.

Just now we are working with thousands of other industries on war materials needed to beat the Axis.

Give us your machinery problems and ideas now for post-war construction and delivery.

**HUDSON-SHARP**  
MACHINE CO • GREEN BAY • WIS



In "Red Streak" Sealing Tapes you find a combination of good paper, good glue and plenty of it, that will rescue your shipments from the fate of rough handling.

Ask for details,



samples, prices.

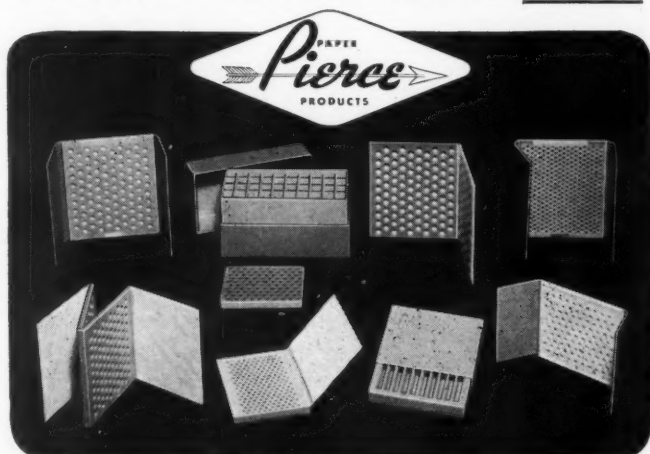
*"Red*  
**SEALING**

*Streak"*  
**TAPES**

**BROWN-BRIDGE MILLS, Inc., Troy, Ohio**

# We Can Make These For You... Now

SEND US YOUR SPECIFICATIONS ON STANDARDIZED ITEMS, OR LET US HELP DEVELOP NEW USES TO MEET YOUR NEEDS. WE ARE EXPERIENCED PAPER CONVERTERS... HAVE A NEW, UP-TO-DATE PLANT... AND ARE IN A POSITION TO SERVE YOU WELL AND PROMPTLY



## NEW...SAF-T-PAK BOXES FOR SMALL PARTS

Pierce Saf-T-Pak Boxes: specially designed to individual requirements for the protection of small precision parts and other fragile items easily damaged in shipment. Can be produced from kraft, chipboard, or special compositions in a wide variety of forms with die-cut cells, cushion liners, partitions, other construction features of protective packaging.

## SPIRAL-WOUND PAPER TUBES AND CANS

Pierce spiral-wound tubes and cans: in diameters from  $\frac{3}{8}$ " to 6" — any required length — from waterproof paper, kraft, chipboard, special compositions. Also, Pierce Saf-T-Pak tubes with felt liner for protection of fragile parts in shipment. Pierce protective caps and tubes for male and female threads: made in any size, waxed or plain.



★ WRITE FOR SAMPLES AND COMPLETE INFORMATION

*Manufactured by*

**PIERCE PAPER PRODUCTS CO.**  
2730-B AUBURN STREET, ROCKFORD, ILLINOIS

# FASTER CARTON STITCHING Starts here!



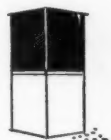
**SAVE LABOR OF  
2 PERSONS**

● General Superintendent,  
Prominent Manufacturer



**CUT LABOR AND  
MATERIAL COST 25%**

● A Midwest Canning  
Company



**INCREASE SHIPPING  
OUTPUT 50%**

● Manufacturer of  
Stencil Machines



**OPERATORS PREFER  
SILVERSTITCHER**

● A Western Paper  
Manufacturer



**SEND COUPON—  
SEE WHY!**

**FREE!** Send Coupon for money-saving folder describing Silverstitchers. Contains carton stitching facts on savings for stapling quickly, easily, and at low cost.

**Acme Silverstitchers**—sturdily built—easily operated—made in many models—all sold under guarantee.



## ACME Silverstitcher

ACME STEEL COMPANY, 2843 Archer Ave., Chicago 8, Ill.  
Please send FREE folder on How to Save on Carton Stitching.

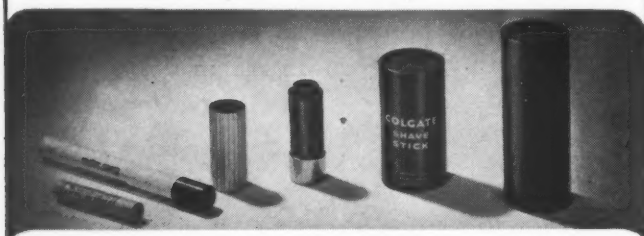
Name.....  
Company.....  
Address.....  
City..... Zone..... State.....



MANUFACTURERS OF PAPER TUBE CONTAINERS

## FUNCTIONAL PACKAGES for *War and Post War*

The engineering experiences of war have developed smart new packages for post-war times.



### attractive • weight-saving

Our long experience in the fiber tube industry has given us the "Know-how" to interpret post-war containers. Consult us on your packaging problems.

## NIEMAND BROS. Inc.

37-11 35th Avenue, Long Island City, New York  
Ravenswood 8-0909 Teletype NY-4-1032

MANUFACTURERS OF PRECISION PAPER TUBE PRODUCTS

## POTDEVIN LABEL PASTER

Ideal for  
**SHORT RUN LABELING**  
of  
**BOTTLES—CANS—CARTONS**



**30%  
LABOR SAVED**

**EASY TO USE**

★ ★  
**25 years  
on the market**

Practical for labeling drug, paint, chemical, liquor, food products, cosmetics. Adjustment not needed for different sizes of labels. Investigate today.

**POTDEVIN MACHINE CO.**  
1244 - 38th Street Brooklyn 18, N. Y.  
Established 1893 Tel. Windsor 6-1700

## Classified Advertisements

All classified advertisements payable in advance of publication. Rates: \$5.00 up to sixty words; enclosed in border, \$10.00 per inch. Publisher reserves the right to accept, reject or censor a classified copy.

### WANTED—FOLDING BOX FOREMAN

Man with complete knowledge and practical experience in cutting and creasing, die making and gluing operations. Plant located on eastern seaboard. Give detailed qualifications and previous connections. Excellent opportunity. Box 235, Modern Packaging.

**WANTED—A superintendent for a paper converting plant.** Excellent opportunity for a man who has had satisfactory experience and is mechanically minded. For the right man will work out a share in the business in addition to a good salary. Equipment: Guillotine, Rotary and Die Cutters, Sheeters, Slitters, Rewinders, Drills, Disc Ruler, Box Machinery, Automatic Trimmer and Wrapper, Laminating Equipment. Cleveland area. Give age, experience and salary. Box 244, Modern Packaging.

### PACKAGING MACHINERY MAINTENANCE MAN

Capable of maintenance and repair of labeling, filling, sealing, etc., machines in modern food plant located near Philadelphia. Permanent, position with excellent opportunity for right man. Good working conditions. Write stating qualifications and salary desired to Box 243, Modern Packaging.

**FOR SALE—One #718 producer variety automatic wrapper** used very little. Atlantic Yeast Corporation, 640 Dean St., Brooklyn 17, N. Y.

**ARTIST PACKAGE DESIGNER—Opportunity for experienced** stylist in Food, Drug, Cosmetic and Product Department of leading New York Industrial Designers. Capable of own Consumer Research and Account Handling. Excellent postwar future and salary. Must know production. Write for interview immediately, stating qualifications. Dohner & Lippincott, 500 Fifth Avenue, New York City. A Division of The Douglas T. Sterling Company.

### SPECIAL TO PACKAGING EXECUTIVES

Informative, practical, S. M. Instruction Brochures compiled from the experience of successful executives, on every angle of packing, marking, sealing, transport, handling and all related subjects.

The set of ten S. M. Brochures—\$15.00. The first Brochure sent on approval.

Order or write for further details to:

Shipping Management, Inc., 425 Fourth Avenue, New York City

**28 MM PLASTIC CLOSURES AVAILABLE—Two million black extra** heavy plastic 28 mm. bottle caps available for immediate shipment without priority for other than wine or liquor. Warren Plastics Corp., Warren, Pennsylvania.

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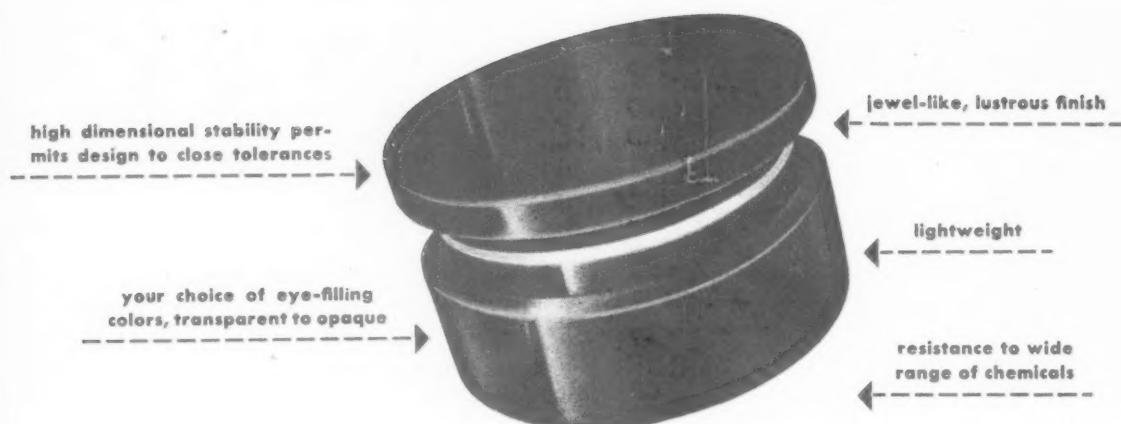
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# LUSTRON



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Whatever you have in mind for your postwar packages, chances are there is a Monsanto plastic that will meet your needs.

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Paper is playing a vital role here at home in posters, newspapers and thousands of messages from the government backing War Loan Drives.

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**CARTON CO.**  
 BATTLE CREEK, MICHIGAN

Today's trend is to glass packaging. Ask us to show you how a glass container can help you sell.

Jan Struther

who wrote "Mrs. Miniver," says



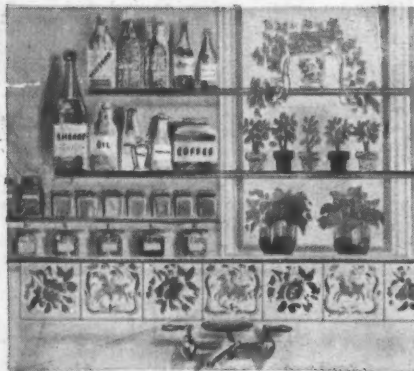
"I like a closet where everything's in glass

it looks so sparkling, so clean, so modern!"

MRS. MINIVER charmed you with her warmth and humor. Her creator, Jan Struther, brings the same delightful qualities to her life in America. Even the closets of her New York apartment reflect her ingenuity and charm. "Tidy closets, with everything in glass,

are such timesavers. Simple to keep clean and bright, so quick to see what's there," says Jan Struther. "And I love the way glass shines on the shelves."

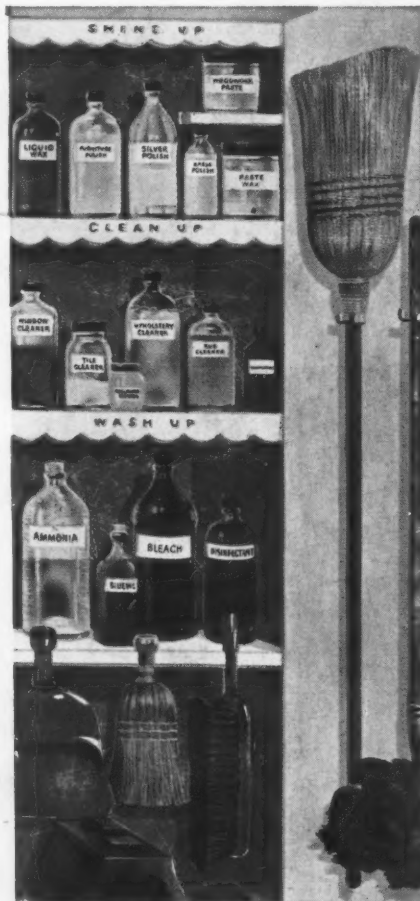
Here you see them . . . Jan Struther's own closets . . . with their fresh, original design ideas you can easily adopt.



**Quick Shelves** Glass shelves, put seasonings near the stove. "Condiments in glass are a timesaver. I can see that I'm getting the right seasoning."



**Bathroom Closet** With its white baroque frame, her bathroom closet is pretty as a picture. The medicines are clean and safe, when in glass. Screwtops keep contents air-tight and moisture-free.



**Cleaning Closet** She carves slots in the bottom shelf for brushes; mop and broom hang on the door. "Polishes and cleaners in glass look so nice. And bottles are easy to pour from, easy to wipe clean."



**Refrigerator** "The children own the top shelf for snacks. We buy everything in glass and store leftovers in their own containers. That saves dishes, food, space."



**Tea Closet** Jan Struther keeps the makings for her tea in a graceful wall "closet." "Sweets look so inviting in glass that I keep them out in the open." Tops re-seal tightly to keep foods inside fresh and good.

**Duraglas**

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